

The

AMERICAN RIFLEMAN



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ANOTHER WORLD'S RECORD!

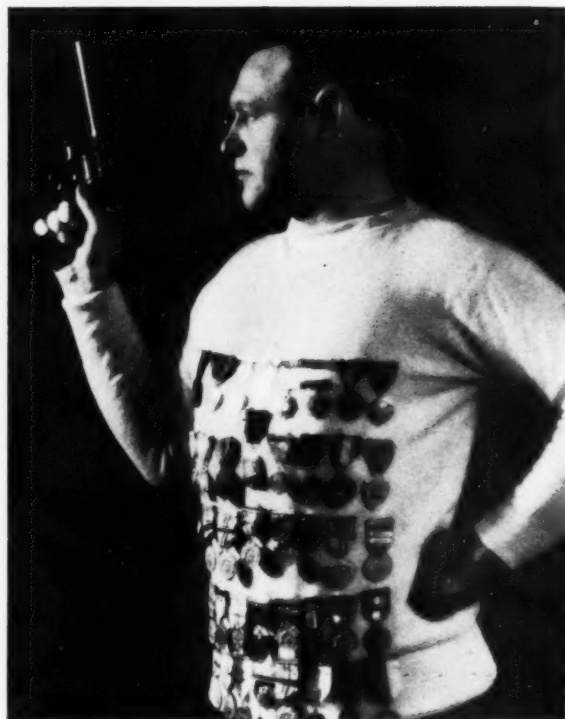
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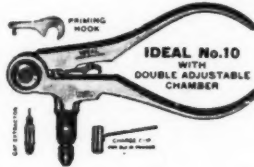
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Wakefield Shoot—Wakefield, Mass.
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First place won by Boston Police Pistol Team—all members using Colt Officers' Model Target Revolvers.

Scores	
Edward Vail	277
W. T. Desmond	275
John H. Cloran	272
Joseph Tierney	266
Team Total	1090

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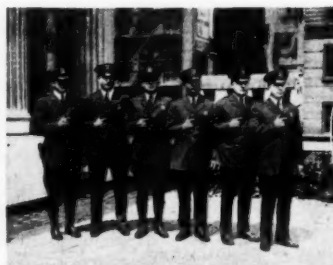


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Left to right: Poska, Dunn, Lt. Downs, Dickerson, Walstrum. The Baltimore Police Team also placed second in the Police Pistol Team Match. Score, 1065.



Eastern National Police Match

Won by New York City Police Team shooting Colt Officers' Model Revolvers with a score of 1073.

Left to right: Schuber, Kohler, Sackett, Wendell, Migliorini, McGovern.



Individual Police Pistol Match

Won by Patrolman John Wendell of New York City Police Team shooting Colt Officers' Model Revolver. Score 275.

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FIRE ARMS DIVISION

HARTFORD, CONN.

The AMERICAN RIFLEMAN

VOL. 80, No. 10

OCTOBER, 1932

WHY?

The American Rifleman is the official organ of the National Rifle Association of America, created and maintained to accomplish the following objectives:

1. Assistance to legislators in drafting laws discouraging the use of firearms for criminal purposes.

2. Prevention of the passage of legislation unnecessarily restricting the use of firearms by honest citizens.

3. Teaching the safe handling of firearms to both adults and young men and women, and providing safe ranges, interesting competitions and attractive trophies, to reduce haphazard shooting.

4. Encouraging adequate police instruction with firearms and providing instruction courses and instructors.

5. Developing higher standards of marksmanship in the uniformed Services constituting our first and second lines of defense.

6. Assisting commercial and government arms and ammunition factories in the development of improved guns and ammunition.

7. Providing shooters in small communities with the same opportunity to obtain the latest and best in shooting equipment as is enjoyed by the residents of the largest cities.

8. Providing new shooters with unbiased information which will avoid their wasting money on equipment not suited to their needs or purse.

9. Standing firmly behind all proper efforts to maintain an adequate but non-militaristic national defense program for the United States.

10. Maintaining proper permanent records of achievement in rifle and pistol shooting similar to those maintained by the respective National organizations interested in other competitive sports.

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EDITORIAL

High Hats and Riding Breeches

THE spectacle of a county sheriff or a city police officer going about his duties topped off with a high silk hat would appear to most citizens as slightly incongruous. The average voter would probably be similarly impressed if he were to see the Governor of his state, his Senator or Congressman at Washington, or his State Assemblyman or Senator pursuing his official duties clad in riding breeches. Such *garb* for many who hold office would be, however, not one whit more incongruous than the *attitude* toward the citizen of these officials after they have been safely elected.

The high silk hat, with or without reason, has become the symbol of snobbishness in this country to such an extent that to snub an individual is generally known as "high-hatting." The "high hat" attitude is not universal with American sheriffs or American police officers, but it is astonishing how it grows in those states which attempt to disarm the citizen by anti-firearms laws. Police officials in New York City, for example, who are ordinarily good fellows, don the high hat the moment they are asked for an application blank for a pistol permit under the Sullivan Law. Several county sheriffs in the State of Pennsylvania who until last year realized that they depended upon the voters of their counties for their jobs, discovered the high hat in their wardrobe within a few weeks after the Witkins Bill had been enacted into law. Every shooter resident in a state which has an anti-firearms statute can furnish similar examples.

It is to be presumed from the use to which they are conventionally put, that riding breeches are the most satisfactory garments to be worn when the straddling of something is the immediate object. The sportsmen of New York State particularly will recall the heroic straddling effort of Governor Roosevelt following the close of the last session of the New York Legislature, when he attempted to please a Tammany Police Commissioner by vetoing the Hanley-Fake Bill (which would have wiped the Sullivan Law off the books of New York State), and at the same time tried to pacify the sportsmen of New York by telling them that he was sympathetic and thoroughly familiar with their needs, and *knew* that no sportsman ever carried a pistol or revolver and consequently could not honestly object to the continuance of the Sullivan Law!

We call to mind, too, the masterful straddling of certain Congressmen who have importuned (copies of their letters going to voters back home) the War Department and the National Rifle Association for the immediate issue of equipment to civilian rifle clubs in their districts. They appeared both surprised and hurt

when informed that the reason the equipment could not be issued was because Congress had not appropriated the money, and an investigation of the Congressional Record indicated that the Congressmen in question had themselves *voted against the appropriation* of these funds! What the Congressmen finally told their constituents at home in regard to this situation is unknown to the writer of this editorial.

We suggest riding breeches, too, for those state and federal legislators who straddle so nicely by writing a beautiful letter to say that they will give the matter their "earnest attention" when a constituent writes to ask that they support or oppose some particular piece of legislation. They commit themselves to nothing, but they fool the voter, and all too frequently when the proposition comes up for a vote the vote is cast against the wishes of the very individual who is so happy to think that his legislator is giving the matter "earnest consideration."

These high-hatters and straddlers all depend upon the voter for their jobs. High-hatting and straddling can be stopped by the simple expedient of not accepting vague promises; by requiring the politician to give a definite promise, and keep that promise or lose votes.

High-hatting is probably not as serious as straddling. It is easier to see a high hat than riding breeches. Because more people can see it, more people will help to knock off a high hat with ballots than will help to pull riding breeches off a straddler.

The situation in the elections this Fall from the shooters' standpoint calls for serious and concerted action. There is no question of party involved. There are honest men and strong men, high-hatters and straddlers in all parties. The sportsmen of this country this year should go to the polls with the individual records of the candidates for all offices clearly before them, and if the welfare of the sportsman is to be considered by those who will go into office during the next few months, the sportsman himself, as a voter and campaigner among his friends who are voters, must consider the problems of the sportsman along with those other problems which normally cause him to vote for one candidate or another. While they do not realize it themselves, it is true that in hundreds of counties and in several states the sportsmen actually hold the balance of power at the polls. Every Sheriff in Pennsylvania who is high-hatting the honest shooters can be turned out of office at the next elections.

"An ounce of prevention is worth a pound of cure" at the polls, as anywhere else. Watch out for high hats and riding breeches concealed under vague promises.

The AMERICAN RIFLEMAN

OCTOBER, 1932

Speed With the Revolver

By ED MCGIVERN

FOR many years we have been reading in the columns of outdoor magazines about the alleged virtues of the two types of revolvers—the single action and the double action. The superiority of each over the other has been made much of. The arguments, of course, always depended upon which type of gun the writer of the article personally favored.

As my hobby for over twenty years has been extremely fast shooting with revolvers, at all sorts of targets, flying and stationary, it naturally followed that I was greatly interested in all of these discussions. I noted carefully the claims made for each gun, and the reasons set forth why each in turn was so much superior to the other.

I searched everywhere for information, and also searched well for shooters who could give me some actual demonstrations, against time, of fast and fairly accurate work with the single action revolvers along the lines that had been so freely written up in the various articles; and I must confess that while the writers and arguers were many, the actual shooters who could really do fast, fancy and accurate shooting with the single action guns were few indeed, and very widely scattered.

I found plenty of men who could perform exceptionally well with empty guns; quick draws, and plenty of fancy flopping around of the guns—sort of gun gymnastics of a very interesting sort; but when cartridges were put into the guns and actual shooting, and actual hitting, had to be done along with the fancy work, the results

were "not so good." I am speaking now of results in general, and am

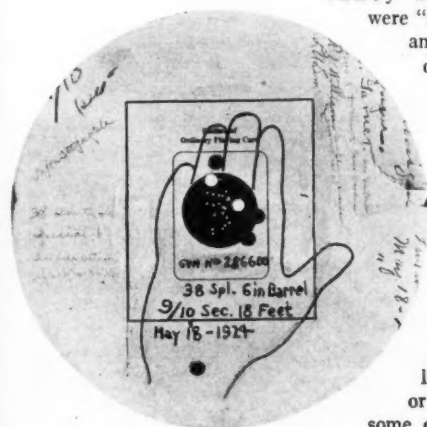
handgun performers that are so well known and still with us.

Eugene Cunningham had some excellent material in *Field and Stream*, June and July issues of 1931, wherein he stated that he had fanned a single action revolver six times in one second, later actually shooting five shots by the same method in three seconds; which is very good time for each stunt as outlined. What results he was able to get in the way of hits, he did not say; but I take the liberty of referring to the matter here as it agrees very well with some of my own experiences. Manipulating empty guns is a very different matter from performing with loaded ones.

As my search revealed the fact that fast and accurate single action revolver shooters were not very numerous, I decided to get into the single action game myself, just to decide a few points of interest relating thereto. As some of the readers of THE AMERICAN RIFLEMAN may know, my hobby of fast shooting has been well worked out with the double action revolvers. A comparison of the two types of guns should be interesting, when each in turn is held and operated with the same trained hands and controlled by the same subconscious mind, in an earnest effort to get extreme speed and sure hits.

As the shots that hit are the only ones that count, the sure hits with each gun would have to form the basis for deciding matters. The time of firing the shots is very important when hits are secured, but is of no importance when hits are not secured. I want to emphasize this fact.

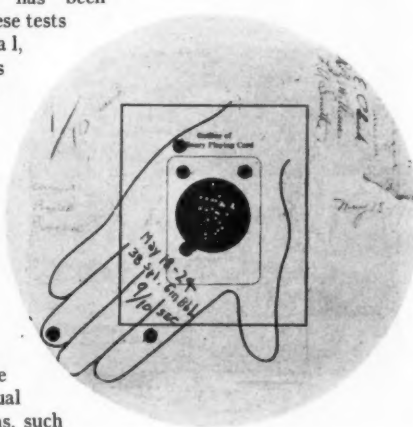
Every effort has been made to have these tests give us actual, practical results that could and



THE TARGETS RECORD THE SIZES OF GROUPS, WHILE THE ELECTRICAL APPARATUS TAKES THE TIME. THE ELECTRICALLY-OPERATED CAMERA CATCHES HITS ON FLYING TARGETS

not making light of the gun or of the ability of some of the high-class

should be expected from the guns under actual service conditions, such



as would obtain in the case of an officer of the law being called upon to outgun a known killer. Therefore, the shots that would hit and be grouped within an effective area are the only ones we consider worth reporting. Hits are first in importance; time is a very close second in importance.

Mr. Jack Climenson had an excellent article in the February, 1932, issue of *Outdoor Life*, on "Practical Defensive Shooting." He states, "Defensive shooting rarely if ever takes place over a distance of five yards." When he makes this statement he is speaking from experience as a soldier of fortune in "Mañana" land. As this should establish a fair working point from which to start, I will call attention to the fact that our fast work with all of the different guns listed was usually done at distances of from 15 to 45 feet.

The timing of all shooting was done with our new and improved electric timer especially constructed for this kind of work, and shown very clearly in the picture. The contact arrangements are clearly shown in the picture of the guns. The timing connections of the single action revolvers are built right into the grips, as will be noted, the posts projecting from the lower end. When the mainspring is flexed (just before it reaches the limit) a contact is made on the built-in switch, which is recorded on the timer. When the hammer is released the electric circuit is broken, which registers the shot on the

watch and on the disc—two separate records. The revolutions of the disc are recorded on another electrically controlled stop watch. This is a very accurate and positive system of checking up, is it not?

As can be seen in the picture, there is no way to operate the contact mechanism in the grip of the single action revolver except by bringing the hammer all the way back to full-cock position, and then releasing it. The fractions of seconds for each shot, each pause, each forward and backward movement, are thus registered accurately. There is no way left open by which the timing machine can be cheated or balked.

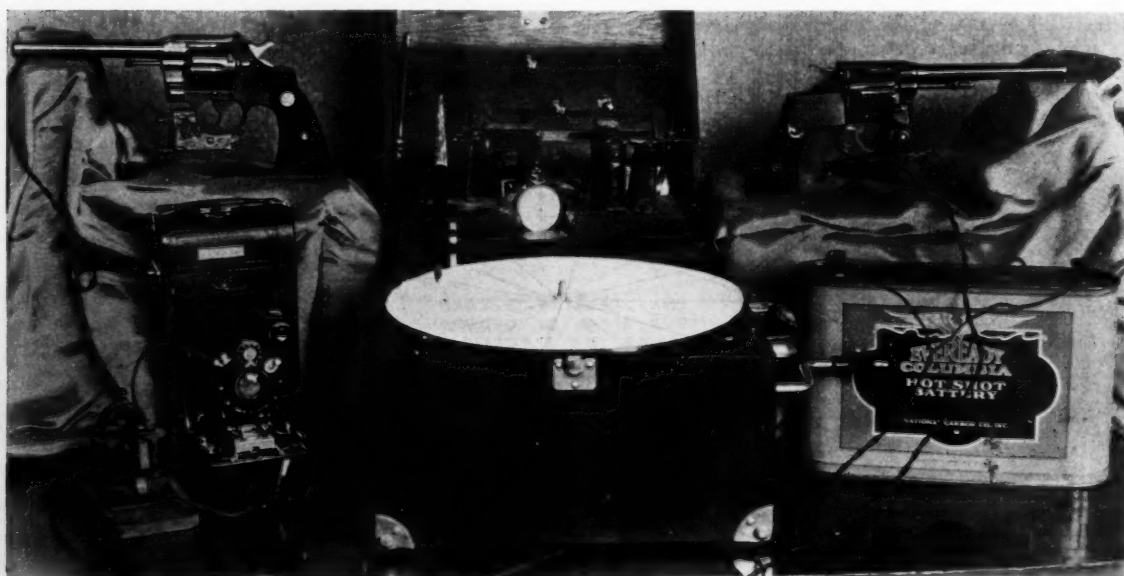
In the case of double action guns, the contact mechanism is fastened securely to the trigger guard, as can be seen. This mechanism is very accurately adjusted, and so arranged that the gun can be cocked by hand without making a contact (making it possible to cock the gun in readiness for the first shot without registering on the timer), but the instant that the trigger is pressed, to release the hammer, the contact is made and registered on the timer.

As the platinum contact points are placed forward of the trigger guard, it is practically impossible to operate the timing machine except by deliberately pulling the trigger all the way back; and I positively state that it is absolutely impossible for anyone to cheat without it being instantly discovered by the person watching the recording instruments, and also by the wit-

nesses who do the checking up. Any tampering with the timing disc will throw it out of exact register with the watch that times the shooting. Any slight variation there will show in the check-up between the watch that records the revolutions of the disc and the other watch that is operated by the electric timer itself, and at exactly the same instant that the pen is marking the divisions of time on the paper on the timing disc. The two watches are entirely separate and apart, and are operated independently of each other, by an entirely different arrangement of contacts. Therein lies the accuracy of the results that are secured with this equipment. This feature also serves as a reliable comparison, and adds greatly to the value of the work so conducted.

The single action revolvers have been surrounded with the romance of the old West, and no other gun of any kind will ever equal them in that respect. Any average American youngster knows about the old Colt's Peacemaker, Frontier Six Shooter, etc. They have a place in history and in Western romance that cannot be denied them. And considering when they were designed, and the fact that they still hold their own in comparison with the best of the later-day models, it would be very foolish on the part of anyone to try to take away the credit that properly belongs to them. No one has ever designed a better grip for the general run of shooters, or for the average hand. These

ELECTRICAL TIMING APPARATUS USED BY THE AUTHOR. THE CONTACT MECHANISM ON THE GUN OR GUNS RECORDS SIMULTANEOUSLY ON BOTH THE STOP WATCH AND THE REVOLVING DISC. THE CAMERA CAN BE HOOKED UP WITH THE OTHER APPARATUS, OR NOT, AS DESIRED, WITHOUT AFFECTING THE FUNCTIONING OF THE LATTER. THE CAMERA IS A SPECIAL ANSCO, WITH SHUTTER SPEED OF 1/300 SECOND AND AUTOMATIC SPRING-OPERATED FILM WINDER. IT CAN BE SET TO OPERATE AT ANY POINT IN A SERIES OF 5 SHOTS, BUT IS USUALLY SET TO OPERATE AFTER LAST SHOT HAS BEEN FIRED



guns, when closely bored and fitted up, will do shooting that will equal any man's best holding. This of course requires that special work be done on them; but our later near-perfect target revolvers also require quite a lot of special fitting to make them what they are.

As the results set forth in this article will show, I can and still do use single action guns with pretty satisfactory results, and I am always willing to give them all the credit they are entitled to. On the other hand, we have the unreasonable claims made by some of the staunch admirers of the old single action guns; claims that are preposterous and out of all reason. Claims that the single action guns are better in every way than the modern double action ones; more reliable, more durable, more effective, more dependable under stress of excitement and under actual service conditions. The best guns to take into the wilderness, faster to get into action, easier to learn to shoot with, easier to load and unload, etc., etc. All this is just empty squirrel chatter, and not supported by the facts established by my experience with both single action and double action revolvers in actual use.

On the draw, for example, equally well-trained men can get the first shot on the spot just about equally fast with either type of gun. The time runs along from $\frac{1}{4}$ second to $\frac{3}{5}$ second. Elmer Keith, of North Fork, Idaho, can, I am quite

positive, draw and place his first shot effectively in a space of time hugging the quarter-second mark very closely when using the single action revolver. My friend, the late John Newman, of Seattle, could also do these things very fast, and very "nice," with the single action guns. But the double action experts can do these same things equally fast and equally well.

My preference, based upon much practice and much study, is still for the double action revolvers, all angles and all positions considered. When the first shot is to be followed up by several more, hurriedly placed, the double action guns have a decided advantage, as I believe results will indicate.

Some time ago in an effort to determine the probable speed of single action guns operated by the traditional methods of fanning and slip shooting, I encountered much trouble with the guns. The wonderful (?) mechanism of the standard single action didn't seem able to stand up to the work in hand—that of firing five shots in around $1\frac{2}{5}$ seconds. As almost everyone interested in the subject seems to know, fanning the hammer of a single action gun is done by holding the gun in one hand, and then slapping back the hammer with the palm of the other hand, the trigger being held back the while, or removed from the gun entirely. This fanning motion is repeated until all shots have

been fired. Much is claimed by some for this method as a means of fast shooting; others claim that the business of fanning the hammer for speed and hits is purely a myth, without any foundation in fact.

The targets, with the grouping and timing of shots fired by the fanning method, seem to upset the myth idea, and supply facts to support the claims that speed and accuracy, sufficient for man-stopping purposes, can be guaranteed by this method. Usually this style of shooting, as well as slip shooting, is done with the trigger removed from the gun altogether, or tied back permanently. I use surgeon's tape for the latter purpose. I do not take the triggers out of my guns unless I intend to use them for triggerless demonstrations exclusively, as the triggers can easily become lost.

The single action gun illustrated with the converted slip hammer, was remodeled by J. D. O'Meara, of Lead, South Dakota. This gun was entirely rebuilt by him, and fitted and adjusted for extremely fast handling. As to how well he did this work, the results testify rather eloquently. The converted fanning hammer for this gun was made and fitted by Mr. Frank Fish, of Lewistown, Montana, who also put an adjusting screw in the back of the hammer to take up the backlash when fanning. This screw was the big secret of our success in getting the cylinder to stop with the primer under the firing pin, instead of

CONTACT MECHANISM ATTACHED TO DIFFERENT GUNS. IT IS OPERATED BY THE TRIGGER IN THE CASE OF DOUBLE ACTION GUNS, BUT BY THE BENDING OF THE MAINSPRING IN THE CASE OF THE SINGLE ACTION





TWO HITS IN THE AIR WITH 2" BARREL COLT. MONTANA STATE FAIR

jumping over the notch as the standard single action guns usually do under stress of extreme speed.

The gun as shown is special in every way. It has been worked on at the Colt factory, worked on by O'Meara, and it has been under Mr. Fish's constant supervision at all times. The metal at the cylinder notches has been hardened so as to stand the rough treatment, and there have been several cylinder bolts broken and replaced. The hand, or pawl, that turns the cylinder, also was prone to break. All of which makes one wonder if fanning the hammer of single action guns was such a common practice in the old days, when replacement parts and gunsmiths of known ability were rather scarce and widely scattered. Did real gunmen, who absolutely had to have their guns in good condition at all times, run the risk of ruining them by this method of handling?

Elmer Keith says that if you care anything at all about your single action gun, "Don't fan it!" I'm forced to agree with him, as this special single action gun has cost more than three standard guns, for special work and replacements of broken parts. It now has an O'Meara two-piece mainspring that is standing the hard work very well. On the other hand, there is shown connected up with the timer a Smith & Wesson .38 Special double action

gun, which is faster than any of the single action work ever done. It still has all of its original parts, just as it left the factory, and it is still working perfectly, and not much if any the worse for wear.

The Colt's double action revolver, shown also in connection with the timing machine, has the same record for three years of such use. It has lately been altered for more speed of action. Would the comparative results here mentioned have been so very different if I had taken these guns into the wilderness? Whenever I have to stake my life on any revolver or pistol, my choice is going to be a standard double action, large-calibre revolver, of Smith & Wesson or Colt manufacture. Nothing below .38 Special with the heavy bullets, or the new high-power

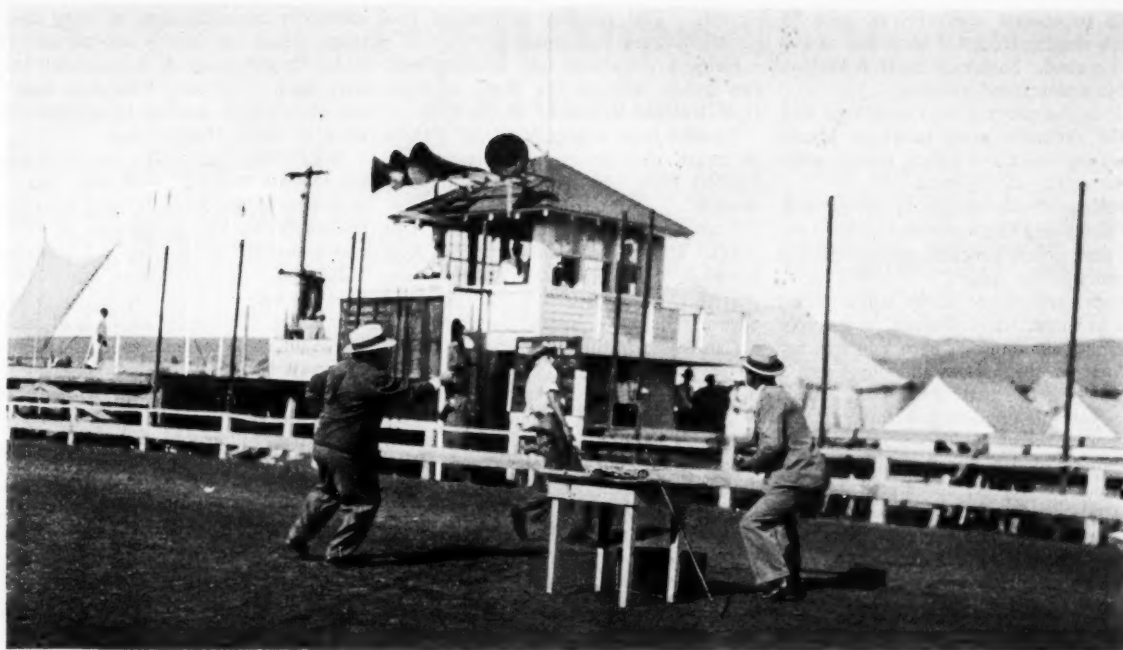
.38 cartridge, will even interest me. And experience lies back of this verdict.

Now we come to weakened mainsprings. I never use them in any gun. I use standard trigger pulls, also; they are safer in every way. I use standard revolvers just as they leave the factory, except of course for the special fanning and slip hammers on the single action guns, and the new gold bead front sight. The reason I do not use weakened mainsprings in fast work is because I want to be certain of sure fire and quick ignition. I do not care to risk injury to my hands by hangfires.

Slip shooting the single action gun is done by holding or tying back the trigger, or using a triggerless gun, and drawing the hammer back by running the thumb across the spur in such a way that at the end of the backward movement the hammer "slips" out from under the web between the ball of the thumb and the first finger. It slides out without any disturbing effect on the aim, and has proven to be a very accurate way of shooting. Two guns, one in each hand, can be handled and fired in this way with excellent results.

Two-handed slip shooting is the fastest and most accurate method that can be employed to manipulate a single action revolver and guarantee sure hits with rapidity of fire. Similar to the fanning system, the gun is held and pointed with one hand and the hammer slipped rapidly from under the thumb of the other hand. Good groups with a lot of speed can be





MONTANA STATE FAIR. FIVE AT A TIME IN THE AIR. ACTION A-PLenty

made in this way. The gun functions better, more smoothly, and lasts longer under this treatment than when fanned. Both systems of course require two hands to point and operate one gun, and it is here that the double action guns show their superiority. One hand only is required to hold, point and operate the double action guns, with equal or greater speed of fire; and equally good, or better, groups can be made with them.

For purposes of comparison, two-handed slip shooting with single action guns gives good groups of five shots in an average of around 1 1/5 seconds (for the fast ones), the groups being small enough to fall within the outline of the hand. Fanning the hammer on single action guns gives five-shot groups in an average of 1 1/5 to 1 3/5 seconds, groups the size of the hand. Each of these systems requires two hands to work one gun, and the average time is not as good as the average time for double action revolvers of the same caliber, held and operated with one hand only.

A double action .45-caliber Smith & Wesson revolver can be held and fired with one hand only, and give good 5-shot groups in less than 1 second, as has been clearly demonstrated. Holding a double action gun with both hands, one hand to hold and point the gun and the other hand to do the trigger work, gives 5-shot groups in 3/5 second, and at times a fraction less.

Drawing one double action gun

from holster and firing 5 shots gives an average timing of around 1 second, 1 1/10 seconds, and 1 1/5 seconds—good groups usually, and at times within outline of the hand. Drawing two double action guns from hip holsters, on Captain Hardy "Buscadero" belt, gives a fraction less than 1/2 second for draw and first shot from each gun, with sure hits. Colt's man target, usually.

The 2-gun draw, and fire 5 shots from each gun, double action, (all hits for 160 shots on man targets) gave an average of from 1 3/5 seconds up to just below 2 seconds, with good 10-shot groups. Shooting 5 shots from each gun, double action, with each hand—10-shot groups—averages 1 1/5 seconds to 1 3/5 seconds; sure hits and good groups.

Shooting 5 targets, all tossed into the air at approximately the same time, by two throwers, ranged from around 1 4/5 seconds to around 2 4/5 seconds, depending upon conditions, using double action revolver. There are four intervals of time of from 4 1/10 to 7/10 second, between 5 such shots.

Shooting 3 targets tossed into the air at the same time, ranged around 9/10 second, having two intervals of time of around 4 1/10 second between shots, using double action revolver.

Shooting can tossed into the air; 5 shots, 5 hits, ranged just around 1 3/5 seconds; double action revolver.

Throwing target with right hand and then drawing gun from holster with right hand and breaking target, ranged from as low as 3/5 up to 1 second, double action revolver, 20 trials.

Throwing two targets at once with the right hand, then drawing gun from holster with same hand and breaking both targets, averaged around 1 1/5 to 1 3/5 seconds.

Groups of 5 shots, double action, using one hand to hold, point and operate the revolver, ranged from around 3/5 to 9/10 second, seldom going much over 1 1/5 seconds. Many of the groups were kept under the outline of the hand. Several late 6-shot groups averaged from 4/5 to 1 second, groups covered by outline of hand.

Fast groups of 5 shots, double action, fired December 8, last, using two



hands to operate the revolver, gave 20 groups ranging from $4/5$ second to as low as $1/2$ second. Shot with Smith & Wesson double action target revolver.

All of the above groups were kept well in the ordinary small telegraph blanks measuring $6\frac{1}{2} \times 8\frac{1}{2}$ inches, several within the outline of the hand.

Holding double action revolvers with two hands may help somewhat to keep the hits pretty well bunched, when confining all shots to one target.

In performing the above stunts please bear in mind that I did not just simply walk out behind uncle's barn, and jerk my gun out of the holster and pop away 5 shots—"just like that." Oh, no. I made very careful preparations, after much (accent on the *much*) practice over a considerable period of time. Study, application and hard work, all entered into the preparations for the final effort. Remember also that I have been specializing in this sort of work for over twenty years. Of late my goal has been a good group in $1/2$ second. My next effort will be to lower this mark if possible; but all of that belongs to the future.

The senses of direction, of location, and of distance, which are more or less inborn but are capable of further development by constant training and practice, come under control of the subconscious mind. From this source comes the ability to control the grouping of shots within a small area, and to deliver them within a small period of time. From this subconscious control comes the ability to shoot from the hip, and from other difficult and so-called fancy positions, and still score sure hits. Shooting guns by sighting over them, until the balance and feel of them in one's hand gives assurance that they are being held and pointed right, makes possible shooting without sighting.

The principle is exactly the same whether single action or double action revolvers, or automatic pistols are used. Thorough familiarity with the weapons, derived from practice until subconscious control enters into the game, is the thing that is absolutely necessary if one wishes to become proficient in all of these different branches of the six-shooter game. Amazing speed and astonishing accuracy can be acquired in this way. There is no mystery connected with it. It is all very practical.

In support of the above, some of the better work in the way of single action draws and other shooting is here listed, done with the special converted hammer gun shown in the picture.

Quick draw from holster and shoot 1 shot on middle of man target in $1/4$ to $3/5$ of a second.

Draw from holster and "slip shoot" 5 shots on a similar target, sure hits, good groups, in time as low as $1\frac{3}{5}$ to $1\frac{4}{5}$

seconds. This requires the use of two hands, and plenty of practice.

Firing 5 shots only, slip shooting with two hands, without the draw, averages from 1 second to around $1\frac{1}{5}$ seconds.

To draw from holster and "fan" 5 shots on target, good groups, using two hands, requires from $1\frac{3}{5}$ seconds to around 2 seconds.

Fanning 5 shots from gun, using two hands, without the draw, gives good groups in $1\frac{1}{5}$ seconds and $1\frac{3}{10}$ seconds.

With two targets tossed into the air at once it requires $1/2$ second for each shot.

Can tossed in the air, 3 hits, in $1\frac{3}{5}$ to $1\frac{4}{5}$ seconds.

Five shots cannot be fired as rapidly or as accurately as with a double action gun. It is a big job to get the 5 shots out of the single action gun while the can is in the air, even when thrown fairly high, operating the gun with one hand only. Using two hands does not seem to work out any too well either on this kind of a stunt with the single action guns. The late John Newman, of Seattle, could often score 3 hits on the can at this style of shooting, using a .22-caliber single action revolver. (I use a .38 Special for this kind of shooting, as a rule.) On one occasion it is on record that he hit the can 4 times, which is excellent work for anyone to do with the single action gun. Five targets tossed into the air at about the same time by two throwers seems to be too big a contract to take on with the single action revolver, for a regular sure-hit performance.

I take the liberty here of again mentioning Mr. Elmer Keith, as he knows single action guns from A to Z, all angles, from actual experience with them under all practical conditions. He also can and does shoot the double action revolvers very well. Ask him to put 5 or 6 shots into a can tossed in the air before it hits the ground, with a double action revolver, and he will do it for you without much trouble. But ask him (or any of the rest of us) to do the same stunt with a single action revolver, and see what he says.

A word about triggerless guns. They are really very effective, practical and accurate for man-stopping purposes. They can also be used very effectively and with fine accuracy at target and game shooting, as has been well proven by such men as Elmer Keith, John Newman, J. E. Berns, and others.

I am often asked if I really do use, and really do see, the gold bead front sight, when shooting aerial targets in a hurry. Yes, I certainly do! I've grown used to having them on my guns. I need them for my kind of shooting. And I use them! Just the instant one of the front sights is injured in any way, or changed at all, I notice it. Revolvers and pistols with sights filed off or otherwise destroyed, are good for just about one thing, and that is

killing or maiming men at very short range, which was exactly the purpose for which they were used, if and when they were used. That they were ever used to any great extent appears to be supported more by rumor than by fact.

A Patridge sight with a full gold bead set into its face and flush with the top and edges of the blade, is being placed on the market for all who wish it. It will be called the McGivern Sight. I published a description of it in *Outdoor Life* in 1924. It is the only all-around sight that I have ever found suitable for all kinds of shooting in all kinds of light, indoors and out. It can be had from Smith & Wesson now. The D. W. King Sight Co., of San Francisco, also made some for me, and no doubt they will supply them if desired.

The Colt's gold bead front sight, furnished to order on their target guns, is the nearest thing to my sight to be had for outdoor use. I use these sights on some of my guns, but they are not good indoor sights, where the light illuminates the face of the target only. The Patridge sight, with the gold bead built into the face of it, is a perfect indoor target sight, as well as a perfect all-around outdoor sight. I use the square notch on all rear sights on revolvers. The idea that no sights are needed on revolvers belongs to the dim and distant past. No man's shooting without sights will ever equal his average shooting with sights.

In the early training of police officers, sheriffs, bank messengers, etc., I have had very good results from what I call "practical" methods. I use blank paper targets, with no bullseyes or sighting spots of any kind. I also teach them to shoot in the dark, by sound and by flashes of light of only an instant's duration. I teach them by the use of the Langrish limless target to place their shots on some particular part of the target. I teach them to turn their back, walk away from the target at 40 feet, and turn at a signal, draw the gun and fire at the 8-inch ring in the middle of the Langrish target. Sometimes only 1 shot, sometimes 5 shots. When it is remembered that a target measuring 11 x 20 inches represents the average effective area of the upper part of a man's body, it will be readily understood that placing shots regularly and with certainty on that size target assures effective results. When the officer can make sure hits on an ordinary letter-head size sheet of paper measuring $8\frac{1}{2} \times 11$ inches, he is sure of getting his man, as this area, measured around the first and second buttons of the vest, includes a very vital portion of one's anatomy.

I have a young friend in West Haven, Connecticut, to whom I gave some double action shooting instructions by correspondence a couple of years ago. He has just

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Try It Yourself

By WM. H. BRADDOCK

That low man sees a little thing to do,
Sees it and does it;
This high man, with a great thing to do,
Dies ere he knows it.
That low man goes on adding one to one,
His hundred's soon hit;
This high man, aiming at a million,
Misses an unit.—R. B.

OF COURSE, that's all very fine and noble. No doubt one should be content with nothing less than the highest, and it is mean and despicable to have a sneaking sympathy with the low man. But, after all, this is a practical world, in which the base of a pyramid is as necessary as its apex, and must be composed of numerous stones which can have no hope of ever rising to the top. Did you ever consider fully the surprising fact that only one man in any one year can win the President's Cup? If you have never felt that way, if you are an expert, or otherwise sit in the seats of the scornful, you will not be interested in my artless discourse and I suggest you turn the page. But if you are an aspirant, a tyro, a—pardon me—plain dub, you may be encouraged by hearing how another plain dub, rather more hopeless than yourself, attained to the height of his ambition—a percentage medal.

My first recollection of the rifled tube is of looking at pictures in a mail-order catalog. How those beautiful slim lines called to me! I think I wanted a gun more than I have ever wanted anything since. But the family feared greatly, vaguely visioning enormous holocausts, dreadful hecatombs of bleeding, slaughtered victims; and, besides, the son of an American missionary in British India is not expected to be skilled in lethal weapons. Also, there was no money to be blown away in smoke, no place to shoot, no instructors, I was too young, and altogether it was out of the question; so that was that.

The Freudians would doubtless explain my present opinions as the reaction to that suppressed desire. Perhaps so, but to me it all seems the result of ripe, considered judgment, based upon the personal experience of a fairly varied lifetime. Anyhow, my children were introduced to the small-caliber rifle before the age of 10, and to the revolver before 15, and when the N. R. A. ceases to support the J. R. C. the Secretary may remove my name from the list of members. I have learned tolerance of many things. I can discuss religion, politics, social organization and

morals without heat, or at least without more than a moderate degree of warmth; but even now, when I am told that a child should not be taught to shoot, the old red mist rises before my eyes, and my fingers long to clutch and hold about the smooth, white, lying throat—Ah, me! But really, hanging is too good for some folks. It ought to be a little something with boiling oil in it.

Anyway, I was—well, I won't say exactly how old, but getting along before the opportunity and the wherewithal both presented themselves at the same time. And now look at me! Maundering and gibbering in my old age, going without lunch because it takes precious time that might be spent in shooting, my eye glistening when it sees a barrel, my hand shaking when it caresses a glass, worse than any drunkard's! And my poor wife without an earthly thing to wear, the children always hungry (or at least asking for something to eat), just on account of this cursed habit! I tell you, if you are born that way you will have to come to it sooner or later; and, just because there is no fool like an old fool, it is wise to catch the fever earlier, and let use and habit establish a sort of modified immunity before it is too late.

My first, aside from a little decorous, carefully National Guard revolver shooting, and a few clay pipes at Coney Island, and that sort of thing, was a little Hamilton bronze-lined affair from a mail-order house. Abysmal ignorance, of course, but wasn't I doing my best to learn better? I meant—wisely, I still think—to start in modestly to shoot, and to see how matters went. The darned thing nearly blew my eye out, but just then I discovered the N. R. A.

Followed a Winchester '04 and a case of those old-stock .22 shorts that the D. C. M. used to sell for a dollar a thou. (Wish he still did.) Ten thousand makes quite a bit of shooting, but there still seemed to be something lacking. The Instructor's Course of the J. R. C. supplied that need. Laugh if you want to; I admit I'm a correspondence-school shot. The point I am trying to make is that it is better to have shot and missed than never to have shot at all. If I had waited for an expert to teach me, waited until I knew just the kind of equipment to get, waited for this and that, probably I would still be waiting. The way to resume specie payments is to resume—if you get what I mean.

About here I can see some of the brothers trying to pick a bone with me for using .22 shorts in a rifle chambered for long rifles. Yes, I did just that horrible thing. Of course it's inaccurate. I believe the best that can be done, that way, is around 95 per cent at 50 feet. But if 95 per cent is the best possible, and you shoot 47x50, which is the best I have done, or seen done, though I may be wrong, it looks to me as if that were a pretty fair sign that you are learning to shoot. Bad for the chamber and barrels? Very likely; but so far I've put just about two cases, 20,000 rounds, through the Winchester 57, and she can still make possibles at 50 yards, if treated right. She looks all right to me, inside. But suppose I do have to buy a new barrel tomorrow? Two cases at \$10 the case, say \$25 all told, counting the freight; subtract that from the price of 20,000 long-rifle cartridges, according to my N. R. A. price list \$100 to \$170, depending upon the brand, and *not* counting the freight—well, looks to me as if I've saved the price of a new barrel. Wish the D. C. M. still sold those old stock .22 shorts. Fifty feet is as good a range to learn holding and squeezing as any other.

It may seem strange that in Nevada, in a mining village full of Westerners, I couldn't find anyone to teach me. It is an article of faith beyond the Mississippi that the West is God's own country, which it is, past the shadow of a doubt—that little corner of Nevada in particular, where I would live if I could—and that every Westerner is *ipso facto, ex officio* and by heredity a first-class shot. The town is full of good shots; some of them brought in a deer every year to prove it—nearly every year, to be exact. Well, I took 'em out on the range, every one that would come, and let 'em do their stuff. The best ones came first, and then after a while no one came but the local forest ranger, and he had been trained in the Army, and used to go without his lunch, too, in order to shoot. My experience, as I am trying to outline it to you, is that a printed book, read with care and applied with energy, enthusiasm, persistence and some brains, may be a better instructor than the fellow who tells you how good he is.

Let me elaborate a little on this point. Tom and Dick and Harry will surely come and perch on the fence alongside when you're shooting; they are bound to do it, just as long as powder continues to make

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ONE MODEL OF MANNLICHER-SCHOENAUER RIFLE

Rifles for Dangerous Game

By COUNT VASCO DA GAMA

(Continued from September Issue)

I ONCE had a wounded elephant after me and would certainly have been trampled to death, as two shots of my .465 express rifle failed to stop him. I had had time to jump sideways but fell on my back, a vine having caught and cut my neck. The elephant turned and was almost on top of me, and I recall seeing myself under his trunk and trying in a desperate movement to put a third cartridge into my gun. But I also remember having realized while on my back that I would never have time to close the rifle and shoot even without putting the gun to my shoulder. My tracker, who was carrying my spare rifle, fired at 20 yards at that psychological moment, and through Providence distracted the elephant, who instead of stepping one pace forward which would have brought his foot right on my stomach, chose to look to the right where the new noise came from, and this saved my life. My wife, who was at about 150 yards from the scene, told me later how puzzled she had been to hear three shots in succession. The natives who were with her, and she herself, recognized the difference in noise between the first two shots of my Holland .465 and the third shot fired from the small magazine rifle, and she could not imagine how I had been able to change rifles so rapidly, so close did the third shot sound to her. Little did she know at that moment how many things had managed to take place between each of these shots!

The Mannlicher cartridges have the following measurements and characteristics: The 6.7 mm. or .256 (often referred to as 6.5 mm.) fires bullets of 156

grains, with 37 grains of powder, giving 2,400 f.-s. muzzle velocity and 1,990 pounds muzzle energy. This rifle is still very popular among adepts of the small-bore school. It is sufficient to kill an elephant at tolerably close quarters, and naturally is a perfect rifle for antelopes, and even for buffaloes if given the heart shot. The ballistics of this cartridge, although it is not of the same power as my favorite .276 Mauser Rigby, make this weapon very well suited for African game.

The next size is the 8.2 mm. or .315, firing a 200-grain bullet with 43 grains of powder, giving a speed of 2,140 f.-s. and a muzzle energy of 2,040 ft.-lbs. I consider this caliber the least interesting of all the Mannlicher line, as the height of the trajectory is about twice as great as that of the .256; and besides, the bullet is not long enough, in my mind, to go satisfactorily through heavy bones or thick muscle without deflecting in its course.

The next size is the 9 mm. or .355, firing a bullet of 247 grains with 49 grains of powder, giving this ammunition a speed of 2,085 f.-s. and 2,400 ft.-lbs. muzzle energy. This cartridge is, of course, much heavier than the two previous ones, but for anybody caring to use this type of rifle I would certainly advise the next size, which is 9.5 mm., or .375. This last gun fires bullets of 271 grains, propelled by 52 grains of powder, giving a speed of 2,150 f.-s. and a muzzle energy of 2,785. These cartridges are very powerful, as can be seen from the above figures, and I must say also that the shortness of the whole cartridge would permit very quick

repeating action, which would make this type of ammunition of outstanding value if it were not for the design of the Mannlicher bolt handle, which does not permit as quick an operation as I would like to have. I had occasion to fire a few hundred rounds with my .355 Mannlicher-Schonauer while in Africa, and although I found it an exceptionally good weapon, particularly considering its price, which is low, I noticed in that particular rifle, and some others of the same make which I handled, that the sighting was absolutely incorrect at short distances. The standard rear sight is marked for 200 yards, which means that at 50 or 100 yards your bullet will go 1 or 2 inches above the bullseye, a condition which a little practice and a set of small files will permit any hunter to correct satisfactorily while on the field.

The Mannlicher-Schonauer Company has introduced on the market three new types of rifles. The first one uses the U. S. Government ammunition, of which I will speak when coming to the Springfield and Winchester rifles. The next one uses a .285 cartridge with bullet weighing 175 grains and propelled by 54 grains of powder, which gives this bullet the very high speed of 2,800 f.-s., with a stopping power of 3,035 ft.-lbs. This type of rifle is, in the line of Mannlichers, the one I consider best of all for my particular taste, although the speed is quite high. It is a gun which as far as weight goes is more or less of the same type as my favorite .276 Rigby Mauser, having the advantage of a flatter trajectory, a small additional weight of the bullet and a much higher



SCOPE-SIGHTED MANNLICHER-SCHOENAUER WITH FULL-LENGTH FOREARM

speed. If the form of the bolt permitted as quick an action as the Mauser's I might on my next trip to Central Africa have a London gunmaker make a special English barrel for this gun and use it against elephants.

Mannlicher's list of weapons is completed by a new 8-mm., or .315, type of rifle, the bullet of which weighs about 190 grains, and is propelled by 54 grains of powder, giving a speed of 2,759 f.-s., and a muzzle energy of 3,300 pounds. This rifle has an extremely flat trajectory and would be equally suitable for big game in Africa and all kinds of other European or American game of every description.

These two last models of the Mannlicher Company seem to me the two outstanding improvements made in recent years, as far as the ballistics of new cartridges go. In ending I must say that the Mannlichers are generally fitted with hair triggers, which I absolutely dislike, being unable to see any advantage in them whatsoever. They should at all costs be removed before the hunter gets accustomed to their usage, which on the field is unsatisfactory.

We will now review the principal English-made magazine rifles, which almost without exception use Mauser actions; and ammunition designed and manufactured for these rifles by the Nobel Company of London, which today is a sort of munition makers trust in England, having absorbed, among others, the famous Eley works.

These guns are generally made by one manufacturer or the other to fit a few of the old Mauser standard cartridges. Anyone wanting to fire the .256 from Mannlicher will find at Messrs. Jeffery a marvelously well-balanced and finished gun with the Mannlicher action, the remainder of the gun being of British manufacture.

The .276 from Mauser is made in England by Messrs. John Rigby & Son, of Sackville Street. There the adept of the small-bore school will find as reliable and handy a little gun as he can possibly expect to get. To my knowledge the other calibers of Mausers are not very much recommended by the British manufacturers. Messrs. Westley Richards, whose rifles are made with such clocklike precision and beauty of finish and appearance as to make them look more like rifles to be used at the Monte Carlo pigeon shooting than in thick bush against elephants, manufacture what they call the Westley Richards "Accelerated Express," firing the wonderful .318 British-type cartridge. This, together with the .276, is in my mind the most reliable and all-around type of ammunition that can be used in Africa.

In certain cases, I must admit, the .276 fires too light a bullet; and although I would not hesitate in going after the biggest elephant with a .276, as I have done very often. I should prefer a slightly heavier ammunition to stalk lions in a prairie. The .318 would do in each and every case. The bullet weighs 250 grains, which as can be seen is at the limit of what can be considered a light rifle, and any heavier ammunition would undoubtedly rank with the extra heavy rifles, to which I am decidedly opposed. This .318 is propelled by 50 grains of powder, giving it a speed of 2,500 f.-s. and a striking energy of 3,500 pounds. Messrs. Westley Richards deliver these guns usually mounted with Karl Zeiss telescopes, and I must say that better than anyone else they have solved the problem of mounting these telescopes in such a fashion that if it became necessary to use the open sights in case, for instance, of a charge, it is quite easy to shoot from underneath the telescope, a feat not easily achieved with the ordinary mounting of other makers

out telescope at as low a weight as 7 pounds, makes it one of my favorites for jungle hunting.

Next in the line of the more popular magazine rifles shooting special English ammunition, we find the .333 of Jeffery's, firing a 300-grain bullet and being much more powerful, of course, than the .318 from Westley Richards. But the recoil of this rifle is already very noticeable, and even for a man thoroughly accustomed to firing heavy rifles a certain displacement of the shoulder is to be expected, which has to be overcome before the bolt can be operated. The inconvenience of this rifle is also due to the fact that the ammunition is quite long, which calls for a long movement of the bolt.

Messrs. Jeffery also manufacture a magazine rifle with Mauser bolt, firing a rimless .400-bore cartridge with a 400-grain bullet, propelled by 60 grains of cordite. This is a more powerful rifle than the .375 from Holland's, and like the latter is heavy, and in my mind unsatisfactory, as it does not possess the characteristics which make me prefer a repeating rifle to an express—lightness and speed.

Next in order, we find the .350 from Rigby, a wonderfully well-balanced rifle of quite powerful ballistics; the bullet, that weighs only 225 grains, being shorter in proportion to its diameter than other types of bullets like the .318 from Westley Richards or the .276 from Rigby. The muzzle energy is 3,400 pounds, with a speed of 2,600 f.-s. The weight of the rifle is a good pound higher than that of the .318 already mentioned, and I fail to see in its characteristics any reason why it should be preferred to the Westley Richards. The recoil is more pronounced, and that is about all.

The next most popular rifle of the magazine type using heavy ammunition is the .375 from Messrs. Holland & Holland. This is a gun which ranks almost among the expresses. The bullet weighs 300 grains and travels at the terrific speed of 2,900 f.-s., delivering a blow of 4,330 ft.-lbs. This ammunition I consider would be much better used in an express rifle than in a magazine. The rifle weighs 8½ pounds, balances to perfection, and, like most British rifles of this type, can be had with detachable barrel—a combination which I do not recommend as I think that after having been assembled and disassembled many times some play is apt to develop. (To be concluded)



SCOPE-SIGHTED RIFLE BY GIBBS, MADE FOR A NUMBER OF BIG-GAME CARTRIDGES

or the ordinary standard mounting of the Mauser Company. I have bagged dozens of buffalo with this rifle, which was included in my battery; and I have used it almost to the exclusion of all others while shooting at night. The telescope permitted me, when the moon was out and bright, to place a bullet with full accuracy at 100 yards in the open country, and the extreme penetration of this bullet was enough at almost any range either to go through an elephant's heart or lungs, or to reach the brain of any specimen, no matter how large. This ammunition, also, I consider the best which can be used in a magazine rifle without the recoil and the expansion of the case preventing the repeating action from being as quick as it should be. Westley Richards makes for this rifle, together with the solid bullet to be used on hippos, rhinos and elephants, a special patent capped bullet which on thin-skinned animals like antelopes, etc., delivers a most tremendous blow. The very perfect balance of this rifle, which can be had with-

Olympic Swan Song

NOTHING but the inimitable pen of Capt. E. C. Crossman could do justice to the "Comedy of Errors" which was supposed to result in the selection of the rifle champion of the world through the medium of the Xth Olympic Games—and Captain Crossman has asked that his official report on the proceedings not be published in whole or in part. We content ourselves, therefore, with the publication of the official scores and with such highlights as are of general interest in connection with the proceedings.

As our editorial comment in the September issue of THE AMERICAN RIFLEMAN indicated, the organization committee for the Tenth Olympic Games under the leadership of Mr. Zack Farmer, of Los Angeles, had no interest whatever in shooting as a part of the Olympic program. The unbiased observer, as a matter of fact, would have gained the very definite impression that Mr. Farmer knew nothing about shooting, cared nothing about shooting, and hoped that shooting would be entirely eliminated from this and future Olympic programs.

It would appear that great pains were taken by the Organizing Committee to keep the Rifle Committee in ignorance as to what was going on and to carefully avoid consulting anyone in the vicinity of Los Angeles who knew the least thing about the shooting game. Despite the plenitude of excellent ranges in California, the Organizing Committee very nearly persuaded the International Olympic Committee that it would be impossible to hold a shooting program in connection with the tenth Olympic Games *because no range facilities were available!*

The program, as is generally known, was finally set up to include only an individual .22-caliber match at 50 meters. The official excuse for this action was that all the games must be held in or approximately in the Olympic stadium. The yacht racing and rowing events, of course, had to be held outside the stadium, but apparently in the opinion of the Olympic Organizing Committee there is more reason for making an exception in the case of yacht racing or rowing than there is in the case of rifle shooting. The Organizing Committee of the Tenth Olympiad was apparently under the impression that there are more yachtsmen in the United States and more experts with the skulls than there are rifle, pistol and shotgun shooters.

In the face of the adverse report which will probably be made by the American Olympic Organizing Committee in regard to rifle and pistol-shooting events for the next Olympic program, it is to be hoped that the International Olympic Committee will realize that Mr. Zack Farmer's committee were not entirely right in this respect. It should be noticed, however, that Mr. William M. Henry, Sports Technical Director, and his assistant, Mr. Al Parmenter, gave every possible assistance to Captain Crossman in the latter's efforts to make the best of a bad situation and to hold rifle matches which, though limited in scope, would nevertheless be something of a credit to the American Olympic Games.

The willingness of Captain Crossman himself to return from a much-needed vacation in Oregon in order to handle affairs for America at the Olympic Games was a splendid example of his unselfish devotion to the game. No one with less experience could have accomplished what Captain Crossman accomplished in bringing enough order out of chaos to be able to put on any kind of a rifle match.

Ned Cutting, appointed as captain of the American Olympic Rifle Team by Captain Crossman because the latter found it inadvisable to act as both American representative and American Team captain, took the unexpected assignment and handled it in the manner in which everyone who knows Ned Cutting would expect it to be handled—quietly and efficiently.

Col. W. A. Tewes, who was in Los Angeles as a spectator for the Olympic Games, gave up the opportunity of witnessing many of the more important events in order to assist Crossman and Cutting. Not only with the American Olympic Rifle Team, but in doing what could be done to provide decent shooting facilities. Colonel Tewes' admitted superiority as a rifle team coach had a great deal to do with bringing through the "green" American shooters into as good a position as they won for themselves in the official competition.

An unsung hero of the match was Mrs. E. C. Crossman, who loaned her very close-shooting Model .52 to the American, Stanifer, to use in the Olympic when it became apparent to the team officers that the .22 Springfield which Stanifer had brought with him to Los Angeles was hopelessly outclassed for Olympic competition.

The Olympic shoot was fired on fourteen frames, each holding six targets; the

left a sighting target, the other five official targets. One shot was fired on each bullseye, then all five were pasted with transparent pasters and another five shots fired. There were 26 competitors actually firing in the match on August 13. An early unfortunate incident was the firing by Lemberkovits of Hungary of a ten on the wrong target. If this shot had been fired on the right target Lemberkovits would have been Olympic rifle champion, with 295. A wide flier 8 was the unfortunate cause of Harding, dropping out of a tie for first place.

The handling of the 400 or more official targets on the day of the match was done by a picked crew of experienced officers and members of the Burbank (California) Rifle Club.

Firing was done from tables, and competitors were furnished 10-shot loading blocks for each table. All targets were inspected after the sighting shots had been taken on the sighting target, and except for the one shot fired on the wrong target by Lemberkovits, the actual shooting of the competition went off without a "hitch." There were no protests on the scoring, and no errors in the statistical office or in the handling of the targets.

Ronnmark of Sweden, the winner, used a Danish rifle and German smokeless ammunition.

Huet of Mexico, who tied for first and lost in the shoot-off, used a Winchester Model 52 and Winchester Five-Star Ammunition.

Soos-Ruska of Hungary, who finished third, used a German rifle and German ammunition, as did Zorsi of Italy who finished fourth.

Anderson of Sweden, who finished fifth, used a Danish rifle and German ammunition. Incidentally, this man in his shoot-off turned in the highest score of the Olympic Matches, making a 296.

Harding of the United States, in sixth place, used a Model 52 action, a Titherington barrel, and Remington ammunition.

Shooting conditions on the day of the match were perfect. It was a calm, overcast day with no wind. The European shooters, accustomed to target pits even for their .22-caliber small-bore rifle shooting, with each shot covered by a transparent paster after it has been fired, did not think a great deal of the American and British system of putting small-bore targets on racks.

The crack shots from Europe used very heavy and fine set-trigger Schuetzen or
(Continued on page 26)

Speaking of Weight

By A. A. MERRILL

"OH, SURE, the Sporter is all right, but it's so heavy! When you've lugged it around all day you want to go to bed for a week!" We've all heard some variation of the same story.

Well, the boy friend and this scribe started getting organized for our hunting trip to Canada about the time we got aboard the boat on our return from a fishing trip up that way in June. Having both run the usual gamut of moose cartridges—.30-40, .33, .45-70, .405—and arrived at the inevitable acceptance of something to handle the .30-'06, we decided to restock our Sporters ourselves for this trip, anyway. So we got two nicely figured blanks from Harner, and went to it; trapped buttplates, detachable swivels, forearm tips, and everything—the usual accepted specifications; and we got them out in plenty of time to fire some thousand shots at Walnut Hill, just to get acquainted, so to speak. With high comb, a good handful of sharply pitched grip, and about 3/8" cast off, those rifles surely did snap up into line with the least amount of effort.

After experimenting with bead front sights of various sizes, both gold and ivory, we decided on the 3/32" ivory, and zeroed by pinching in about one third of the black at 200. With these larger ivory beads a front-sight cover should be taken along for use when not actually hunting, and one should carry a spare. It made me rather suspicious of the boy friend to note that he had put a 3/32" ivory bead on his 54 Winchester, and the suspicion was confirmed after we had left the wharf. "I brought the Winchester after all," said he; "the Sporter is so d— heavy."

Of course we had ammunition enough for a winter in Alaska. Bill Hill had provided some Remington 180-grain bronze point with copper jacket, which replaced the older cupro-nickel bullet. Then we had some National Match and I. & P. to measure distances with. (One "thousand-yard" rock in the lake resolved itself into 425, and we were getting target at 800 on the far shore of a lake reputed to be a

mile long.) We had about 80 rounds each of various kinds, and actually used three rounds for three head of game—a moose and two deer.

Year after year the same argument arises: "The 180-grain at 2,700, or the 220 at 2,400?" Unquestionably one will kill as effectively as the other if well placed, but we rely upon the speed, with its disruptive effect, of the 180 in the event that we should paunch the game. Any of the various 180-grain expanding bullets will go through the largest deer; but in the writer's experience they have always acted in the same way on moose—pierced hide, bones, soft tissues indiscriminately on one side only, pulping heart and lungs, and usually lodging in small broken pieces in the chest wall of the far side.

In this instance, Bastey was covering two angles of a swamp, himself out on the barren, with possibilities of having to cover ranges from 100 to 350 yards, depending upon which direction a moose might take on leaving the green land. Hearing a stick crack, he involuntarily jumped on a rock for a clearer view, only to catch sight of a bull swinging away from his direction, and so screened as to be only indistinctly seen. Any part of the moose was practically indistinguishable from any of the black holes and shadows about him. (It was a dull, rainy day.) Bastey had seen the horns of a good bull, and at the range (120 yards) a snap shot was justifiable. But after shooting, he could hear the moose crashing his way through the swamp. Tracking the moose, we followed him some 40 yards into the swamp, where his trail was lost in those of other moose; and, as far as we could see the trail plainly, there was no blood. The moose had not staggered perceptibly.

Considering the disadvantages of the shooting, the probability was that that moose was uninjured, so we left him for the time, and hunted toward another green land, some half mile across the barren. On our way back, passing the first swamp, we decided to lunch there at the brook;

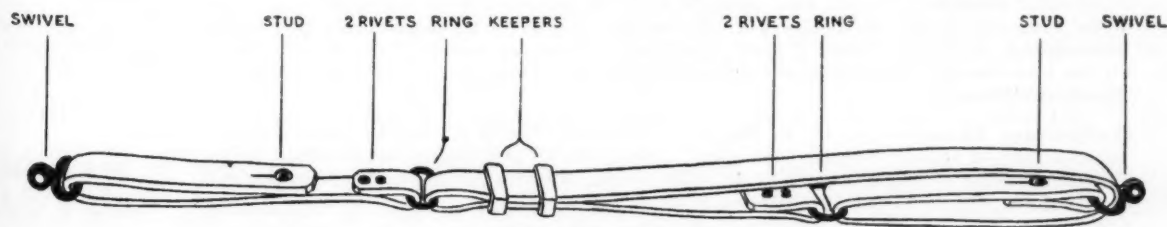
but first went over the ground again, and started circling to cut the moose's trail. A little over a hundred yards from where he was when fired at, the moose lay dead. There was no blood in any track, or on any bush. What a crime it would have been had we been too easily satisfied by the lack of evidence that the animal was wounded!

Now, the 220-grain would probably have gone through, and given some blood to follow. The Frankford 172 would also have been preferable, if White's experience in killing African game is to count—and his observations have been extensive enough to warrant his speaking authoritatively.

These 180-grain bullets go to pieces too readily in moose. All the light, high-speed, expanding bullets do; and perhaps my old friend Uncle Jim Sabeau is right in contending that, in the long run, the long, heavy, full-metal-cased bullet will give the best account of itself on moose. This 75-year-old guide has used nothing else for his own shooting for years—shoots away the soft-points for practice, and saves the f. m. j. for game; just the reverse of what most of us do.

Let it be understood that in all this time there had been some reference to the comparative weights of the arms carried on this expedition. What real difference it made was not quite apparent, because type of country hunted in and circumstances of hunting largely dictate the mode of carrying the rifle, and the boy friend had evolved a real sling-strap, and we were using two of them on this trip. After going through the one-piece carrying-strap phase, the so-called Whelen type, and various harnesses, we have now a modification of the Kerr, with suggestions by Captain Gerrish. And here is a hitch, quick and comfortable to get into for any position—and it holds. It may be an infringement if made for commercial exploitation, but as a home-brewed article it can't be beaten. Conditions are different in Canada, where only

(Continued on page 25)



THE BASTEY SLING

FEATURE TROPHIES

WON WITH **WINCHESTER**



C. T. PAUGH, whose brilliant 794 x 800 won him the Preliminary Dewar.

Preliminary Dewar, and Small-Bore Palma the Famous **WINCHESTER**



OHIO CIVILIAN TEAM—winner of the Caswell Match. *Left to right, front row*—Milton Miller, Stanley Channel, R. V. Nutter, Dale Arnold, Coach. *Back row*—D. E. Jacoby, Dan Burr, E. N. Littleton, Team Captain, Gail Evans, L. A. Wilkens, Assistant Coach.

Again the searching test of the Camp Perry matches has proved the consistent accuracy and dependability of the Winchester Model 52 and Precision Ammunition. With this great combination, C. T. Paugh of Wayne, Michigan, turned in a brilliant 794x800 (twice over the Dewar course) to win the Preliminary Dewar with its handsome trophy.

With this combination Lawrence A. Wilkens of Norwood, Ohio, captured the Winchester trophy in the Small-Bore Wimbledon, just squeezing out victory over Russell Wiles, shooting Precision 5-Star, out-ranking him on a 195x200 score.

With this combination E. V. Menefee of Rising Sun, Indiana, turned in a possible 225x225, to win the Small-Bore Palma match with another brilliant performance.

With all six shooters using the Model 52, and four of them shooting Precision, the Ohio Civilian Team won the Caswell match with 2373x2400. R. V. Nutter, shooting the Winchester combination, was high man for the entire match, with a splendid 399x400.

Many other outstanding results were achieved with Precision or Model 52, or both, as noted below. Fifteen of the twenty members of the American Dewar Team, which scored 7872 in the International match, shot Model 52's—three of these with special barrels. Seven shot Precision. Of the total shooters who registered at Camp Perry, more than four out of every five shot a Winchester Model 52.

Preliminary Dewar—1st, C. T. Paugh, 794x800, Model 52 and Precision 200—2nd, Thurman Randle, 792x800, Model 52—3rd, L. A. Wilkens, 792x800, Model 52 and Precision 5-Star (First 20 shots with a competitive ammunition.)

Small-Bore Wimbledon—1st, L. A. Wilkens,

195x200, Model 52 and Precision 5-Star—2nd, Russell Wiles, 195x200. Precision 5-Star—3rd, R. A. Swigart, 194x200, Model 52.

Small-Bore Palma—1st, E. V. Menefee, 225x225. Model 52 and Precision 5-Star—2nd, W. J. Summerall, 224x225—3rd, W. P. Schweitzer, 224x225, Model 52.

E. V. MENEFEЕ—who Small-Bore Palma trophy with 225 out of 225.

WINCHESTER
REPEATING
ARMS CO.
NEW HAVEN, CT

HIB AT CAMP PERRY

PRECISION AND MODEL 52

war, all-Bore Wimbledon
Palgo to Shooters Using
WINCHESTER Combination

R. V. NUTTER
of the Ohio Civil-
ian Team whose
399 score made
him high man
in the Caswell
Match.



LAWRENCE WILKENS, left and RUSSELL WILES, right, first and second in the Small Bore Wimbledon with the trophy won by L. A. Wilkens by his victory in this match.

Individual Grand Aggregate — 2nd, W. P. Schweitzer, 1073, Model 52, 5-Star and one other ammunition—3rd, L. A. Wilkens, 1071, Model 52 and Precision 5-Star.

Short Range Two Man Team Match—1st, L. A. Wilkens, 399 — Thurman Randle, 396 — 795. Wilkens shot Model 52 and 5-Star. Randle shot Model 52—2nd and 3rd teams all shot Model 52—John Adams and J. A. Wade scoring possibles of 400.

Long Range Two Man Team Match—1st, Thurman Randle, 396 — L. A. Wilkens 390 — 786. Both shot Model 52's. 2nd, Stanley Channel and J. W. Giffen, 782. Both shot Model 52 and 5-Star. Giffen's score of 199x200 at 200 yards was the outstanding feature of this match. 3rd, W. P. Schweitzer and T. Samsoe, 779. Model 52 and 5-Star.

Individual Short Range (Metallic Sights) — 3rd, Ellis Lea, 399x400. Model 52 and 5-Star.

Caswell Team Match—1st, Ohio Civilian Team. All shot Model 52 and four of the six used Precision. R. V. Nutter with Model 52 and Precision 200 was high

The two possibles scored by R. V. Nutter over the 100 yard range in compiling his 399 score in the Caswell Match. Actual diameter of, 10-ring, 2 inches.

man for the match with 399x400 — 2nd, American Legion Team. Three shot Model 52 and three Precision—3rd, Officers' Reserve Corps Team. Three shot Model 52 and three shot Precision.

Fidac Match—Five of the ten members of American Team shot Precision, making 972 of team's total score of 1943.

Unlimited Re-Entry Matches, August 30-31, 50 Yards—First (tie) 300x300—W. P. Schweitzer, L. A. Wilkens, E. V. Menefee and J. W. Giffen. All shot Model 52 and 5-Star.

100 Yards—W. P. Schweitzer and Thurman Randle tied at 299. Former with Model 52 and 5-Star, latter Model 52. L. A. Wilkens and Stanley Channel tied at 298. Both Model 52 and Precision.

200 Yards—1st, L. A. Wilkens, 288x300. Model 52 and 5-Star—3rd, F. J. Paffe, 285x300 Model 52.

ENEFE—w Small-
ma trophy able of
of 225.

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RIFLEMA OCTOBER, 1932

WINCHESTER

TRADE MARK

European Low Pressure High-Velocity Shotgun Ammunition

By L. ERIC KROGIUS

WITH the apparently constant decrease of North American waterfowl during the last decade, it became ever more necessary to develop a long-range shotgun ammunition. As Captain Askins so picturesquely puts it, the American duck, and especially the clever mallard, is well on the way to being "educated" to the ordinary shotgun range; and the bulk-powder loads, supreme for such a long period, are threatened with becoming ineffective for real long-range shooting. Possibly with this in view the American powder manufacturers set out to produce a new powder more suitable for long-range work than the bulk powder, and thus the epoch of the "super" ammunition set in.

Although we Europeans are as yet not in dire need of extreme long-range ammunition, some of this new American ammunition has found its way over to the Old World; and, being an inveterate wild-fowler, I have tried out and speculated upon the merits of this new variety of gun fodder. I believe that it will be interesting to American shotgun enthusiasts to know something about "the latest cry" in the European line, especially as the latest innovation over here shows some quite remarkable features.

The foremost fact which strikes one in connection with the new American ammunition is the very excellent waterproofing of the cases, which by far surpasses anything of the sort in the European line. It must be admitted that the European ammunition manufacturers pay far too little attention to the proper waterproofing of their cartridge cases, which, especially from the wild-fowler's point of view, is a grave fault. The second fact is the rather heavy recoil and muzzle blast of the American ammunition as compared with European ammunition—British ammunition being not considered at all in this treatise. Hunting conditions throughout continental Europe, and especially in the Nordic countries, do not, on the average, necessitate the use of heavy duck guns, and hence the 12-gauge all-around gun, weighing from 6½ to 7 pounds, is very much in vogue. It is obvious that with these comparatively light and short-barreled double guns, muzzle blast and heavy recoil will not be popular.

Previous to the great improve-

ments in the European, and especially the German, flake nitrocellulose powder, the American bulk powder ammunition was fairly much in use. The European powder manufacturers never succeeded in putting on the market a bulk powder equal to that of du Pont, which powder I believe is still unsurpassed as to regularity of pressure. As far back as 1924 I had some Remington Arrow shells—3 drams bulk, 1¼-oz. chilled—tested in Germany, and a 5-shot test showed no greater variation in pressure than 0.3 tons, which is remarkable. This last-mentioned load, and even the one containing 3¾ drams bulk, is O.K. in the European 6¾ to 7-lb. gun, both as to recoil and muzzle blast.

Previously the continental European powders, including the pure gelatinized flake nitrocellulose powder, were unreliable in some respects. Pressures were irregular and comparatively high, and the powders were rather too violent in burning for good patterning ability. Breech pressures of close to 4 tons were by no means unusual. It can safely be assumed that for a considerable period the American bulk powders were rather ahead of the European bulk and gelatinized flake powders. Conditions changed, however, and the breech pressure, especially of the flake powder, was brought down to about 3 tons without loss of muzzle pressure. The German powder manufacturers put on the market very reliable flake powders, and there is no doubt that now the best powders produced in Europe are German, foremost among them being perhaps the powder manufactured by the renowned Rottweil Powder & Ammunition Company.

It is apparent that a gelatinized powder is far less susceptible to dry heat, dampness and weather influences generally than

bulk powders, and this explains why this type of powder is so very popular especially in the Nordic countries, where climatic conditions reach great extremes.

It is a well-known fact that American bulk powders do not handle a shot charge of 1¼ oz. well if the powder charge is increased above 3¾ drams. The bulk powder is a low-pressure powder par excellence, and it has a particularly wide flexibility up to a certain point. It will, as a matter of fact, burn cleanly and regularly in any 12-bore load from 1 oz. shot and 2¾ drams powder to 1¼ oz. shot and 3¾ drams powder. In flexibility this powder is equaled by few others, but above 3¾ drams this type of powder is apt to burn violently and give excessive breech pressures. Hence the necessity for a more progressive-burning powder with a greater flexibility beyond the maximum point of the bulk powder.

The old type central European flake powder rather resembled the bulk powder in that it was apt to give high breech pressures beyond a certain load; but at the same time it lacked the "downward" flexibility of the bulk. Thus it was a powder of very limited scope. Hence the standard shot charge was fixed at about 1½ oz. in the 12-bore for a considerable length of time. This was never a popular load, however, and as soon as improved and more progressive-burning flake powders were produced, shot charges were increased to 36, and even 37 grams, in the 2¾" case.

This heavy charge of 36 grams is now generally used throughout central Europe and the Nordic countries in all 12-bore guns, whether heavy or light. I wish particularly to emphasize the fact that 36 grams is slightly more than 1¼ oz. (35.42 grams), the usual charge in the American 2¾" case. How this heavy European load compares with the American 1¼-oz. long-range super load, we shall see later on.

Very recently still further progress has been made in the development of the flake nitrocellulose powder, and the German ballistic laboratories have succeeded in giving this powder even more progressive burning qualities, thus increasing the ranging ability of the ammunition. It is a well-known fact that a quick-burning powder will cause pellet injury

THE "RED" ROTTWEIL SHELL CASE, SHOWING SPECIAL ALUMINUM POWDER CHAMBER INSURING CONSTANT SPACE FOR POWDER CHARGE. THIS IS A FEATURE FOUND IN NO OTHER SHELL



within the case, which injury is probably greater than that caused by the compression of the shot column during cone passage, the friction during barrel passage, and the renewed compression during choke passage. Shot deformation means irregular patterns and excessive shot stringing. Hence, the more progressive burning the powder, the more nearly perfect will the shot charge be upon leaving the muzzle.

A comparatively "soft" initial pressure does not necessarily mean a low initial pressure. Whereas the action of a quick-burning powder may be said to resemble a sudden blow, the action of a progressive-burning powder can be said to resemble a sudden push. This is, perhaps, a somewhat limping metaphor, but space limitations forbid a more scientific explanation. What I wish to emphasize is the fact that a push can be heavy enough, and in fact some of the progressive powders give the shot charge a rather heavy push, and show considerable breech pressures, but in spite of this the combustion of the powder is comparatively slow.

For both the American sportsman and ballistician it is no doubt interesting to note that American and central European powder manufacturers apparently are following two different principles in this respect. The American principle appears to be to utilize the properties of the progressive type of powder to the utmost as to velocity and striking energy, *without* decreasing breech pressures; whereas the European principle seems to be to decrease breech pressures as far as possible *without* decreasing the velocity and striking energy accepted as a satisfactory standard. You could blame the continentals for conservatism were it not for the fact that the ammunition in the majority of cases is likely to be used in comparatively light guns, quite a good many of which are of cheap grade; while the question of recoil, apart from that of mere safety, must also be taken into consideration. Whereas the American knows full well that the super type of ammunition is intended for the 8-lb. gun, we Nordics, at least, are very much inclined to put any 2 3/4" shell into our 6 3/4-lb. guns. The high-grade continental gun will stand the super ammunition all right, but the man behind the gun will usually refuse an ammunition that is too pounding.

To come down to plain facts, the breech pressure of the 2 3/4" 1 1/4-oz. American Super X type of shell lies somewhere around 3.75 tons, as far as I can gather. This figure tallies fairly well with the one obtained when that shell was tested in the international pressure gauge in Germany

(3.175 tons). Recently the new normal pressure gauge (Fig. 1) has been accepted in central Europe, and this gauge, wherein the pressure is taken at the wadding, is said to give very reliable figures.

Anyway, the figures given above rather closely approach the very maximum allowance for standard European ammunition, or 3.81 tons. The German ammunition actually is loaded not to exceed 450 atmospheres, as otherwise recoil and muzzle blast will be too heavy, especially if progressive-burning powders are used. It must be taken into consideration that the more progressive burning the powder, the higher the muzzle pressure and consequently the muzzle blast. Heavy muzzle blast may be just as distressing to the man behind the gun as heavy recoil. As the average European hunting gun will have a barrel length of from 26 1/2 to 28 1/2 inches, it is easy to understand that heavy muzzle blast is rather feared. With powders grow-

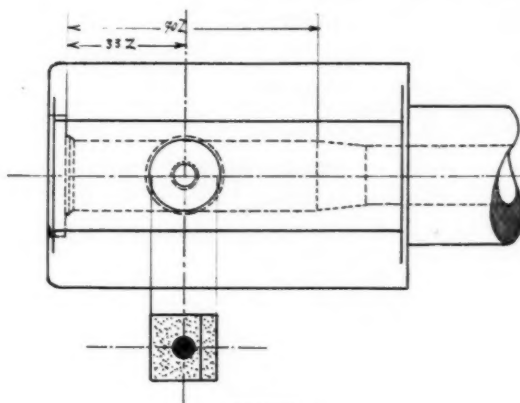


FIGURE 1

ing ever more progressive-burning, the problem of muzzle blast will be rather a grave one in the future.

It must be remembered, too, that any powder developing a comparatively high breech pressure will deform shot more than will a powder developing a low breech pressure, even if the latter is progressive burning. Plated shot (Lubaloy) will naturally withstand a greater pressure than ordinary chilled shot; but the above statement holds nevertheless. Hence the lower the breech pressure and the higher the pressure up the barrel length, the better.

As far as the average European shotgun ammunition is concerned, it can be roughly estimated that the pressure 4 inches from the cone will be 200 atmospheres, and 20 inches from the cone only 40 atmospheres. This is roughly depicted by the curve AA', Fig. 2. The curve BB' is a purely theoretical one, indicating a powder burning so progressively as to approach the ideal of powder combustion. It is perhaps presumptuous to hazard a guess as to the ul-

mate possibilities of future powders, but I will take the risk nevertheless and venture the guess that we shall have powders developing no greater breech pressure than about 200 atmospheres, and burning with practically constant pressure from breech to muzzle (curve CC'). This will probably be an entirely new propellant chemically, differing radically from present-day powders. There is no limit to the ingenuity of man, and given time the powder chemists will sooner or later do the trick.

As a matter of fact there are already indications that something approaching this feat does not belong to the realm of the impossible at least as far as breech pressures are concerned. The chemists of the Rottweil laboratories have recently succeeded in developing their flake powders to such a point that breech pressures below 2 tons have been attained, and this without decreasing the muzzle pressure. Tables Nos. 1 to 4 give the mean results of 40 shots with four shot sizes, and it can be seen that the mean breech pressure is as low as 1.765 tons. The Rottweil 2 3/4" shell that was tested contained 2.15 grams of the latest flake powder of the progressive-burning type, and 36 grams of shot.

The surprising feature is that this low (breech) pressure powder develops such a high velocity and so great pellet energy, which again clearly indicates the fact that the muzzle pressure must be comparatively high. A direct comparison with the American type of super ammunition is obviously difficult, as weight of pellets, number of pellets, distances, diameters of circles, etc., differ more or less in the two countries. It can nevertheless be seen that this shell compares very favorably with the higher (breech) pressure American load. Recoil and muzzle blast of this cartridge is in no wise excessive even in the light 6 3/4-lb. gun.

Expressed in meter-seconds, the Rottweil cartridge is loaded to give a standard velocity at 5 meters from the muzzle of 350-360 m.-s. I have figures before me showing that the mean velocity of the Super X shell, when tested in Germany, was found to be 372 m.-s. as against the average of 355 m.-s. of the Rottweil shell. The difference of velocity over longer distances will be very slight, while it must be remembered that the loss of velocity over any given distance is greater, the greater the velocity. It is an open question whether the slight gain in remaining velocity is worth the considerable difference in breech pressure.

Several years ago the Rottweil company put on the market a beautiful shell called

the R. 70. I have figures showing that this shell, intended for trapshooting purposes, developed a breech pressure of close to 3 tons, and a velocity at 5 meters (16½ feet) from the muzzle of 369 m.s. This does not fall far short of the American shell mentioned, and shows that European ammunition can be made to develop high velocities if need be; but as the recoil was rather heavy, although by no means heavier than that of the Super X, the shell was refused by trapshots, and its manufacture discontinued.

American ballisticians will no doubt develop a load delivering a 5-meter veloc-

ity of perhaps 400 m.s.—they may have done it already—but it remains to be seen if this can be done with a breech pressure considerably below 4 tons. We shall soon reach a point where the killing power of a load is more limited by its patterning ability than by its striking energy—if development follows the super high-velocity line. The other way about, possibly, is to utilize the low breech-pressure powder of the European type for the delivery of very heavy shot charges at comparatively normal velocities.

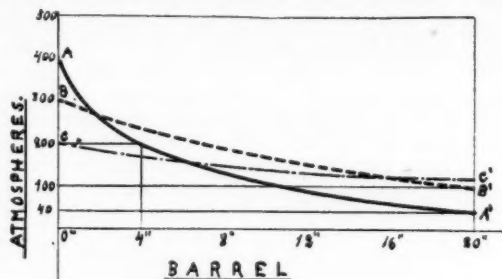


FIGURE 2

Table No. 1

2.5 mm. = roughly American No. 7114

Number of pellets to the load	397
Average weight per pellet	0.09045 grams
Velocity 5 meters (roughly 16½ feet) from muzzle	1,146.6 f.-s.
Velocity 35 meters (roughly 38 yards) from muzzle	686.2 f.-s.
Velocity 55 meters (roughly 60 yards) from muzzle	483.1 f.-s.
Mean breech pressure	268.9 atmospheres
Energy per pellet at 35 meters (38 yards)	1.46 ft.-lbs.
Striking energy 75 cm. (29½") circle at 35 meters	465.1 ft.-lbs.
Energy per pellet at 55 meters (60 yards)	0.73 ft.-lbs.
Striking energy 75 cm. (29½") circle at 55 meters	116.8 ft.-lbs.

Table No. 2

2.75 mm. = roughly American No. 6

Number of pellets to the load	292
Average weight per pellet	0.125 grams
Velocity 5 meters (16½ feet) from muzzle	1,148.4 f.-s.
Velocity 35 meters (38 yards) from muzzle	738.9 f.-s.
Velocity 55 meters (60 yards) from muzzle	530.1 f.-s.
Mean breech pressure	297.5 Atmospheres
Energy per pellet at 35 meters (38 yards)	2.34 ft.-lbs.
Striking energy 75 cm. (29½") circle at 35 meters	540 ft.-lbs.
Energy per pellet at 55 meters (60 yards)	1.22 ft.-lbs.
Striking energy 75 cm. (29½") circle at 55 meters	130.6 ft.-lbs.

Table No. 3

3.00 mm. = roughly American No. 5

Number of pellets to the load	216
Average weight per pellet	0.165 grams
Velocity 5 meters (16½ feet) from muzzle	1155.7 f.-s.
Velocity 35 meters (38 yards) from muzzle	739.9 f.-s.
Velocity 55 meters (60 yards) from muzzle	574.5 f.-s.
Mean breech pressure	268.6 Atmospheres
Energy per pellet at 35 meters (38 yards)	3.09 ft.-lbs.
Striking energy 75 cm. (29½") circle at 35 meters	548.1 ft.-lbs.
Energy per pellet at 55 meters (60 yards)	1.83 ft.-lbs.
Striking energy 75 cm. (29½") circle at 55 meters	167 ft.-lbs.

Table No. 4

3.25 mm. = roughly American No. 4

Number of pellets to the load	179
Average weight per pellet	0.1978 grams
Velocity 5 meters (16½ feet) from muzzle	1,166.2 ft.-s.
Velocity 35 meters (38 yards) from muzzle	778.8 f.-s.
Velocity 55 meters (60 yards) from muzzle	590.8 f.-s.
Mean breech pressure	277.1 Atmospheres
Energy per pellet at 35 meters (38 yards)	4.11 ft.-lbs.
Striking energy 75 cm. (29½") circle at 35 meters	611.1 f.-s.
Energy per pellet at 55 meters (60 yards)	2.41 ft.-lbs.
Striking energy 75 cm. (29½") circle at 55 meters	176 ft.-lbs.

Some Observations on Stopping Power

By H. LLOYD FOLSOM

IN EXPRESSING thoughts upon the subject of American rifles and cartridges, their killing power, etc., I am simply drawing upon impressions resulting from my own personal experiences, and am not doing it in a spirit of controversy; because, after all, many of us have widely divergent and positive views upon what are the best rifles and cartridges for hunting the heavier species of game.

To begin with, bullets divide themselves into three general classes:

1. The bullet that goes right through the animal;

2. The bullet which does not go through because it blows to pieces upon and during impact; and

3. The bullet which does not go through and which does not fly to pieces.

If all three bullets mentioned above are of about the same caliber and weight, Class 3 is by far the most effective, if there is a reasonably good charge behind it, because only in Class 3 does the animal receive the full shock or "wallop" that is behind the bullet. I do not know about the mathematics of this, but I certainly have seen the results of it.

Now, then, leaving the Government .30-'06 and the .30-40 Army (.30 Krag) out of the discussion, the Class 3 type of bullet is not generally found among the small bores, with a few exceptions, but it is found among the large bores; and, unless I am hunting in a country where shots are at long range and a flat trajectory is absolutely essential, I personally use a heavy, comparatively slow-moving bullet of large caliber every time. And after all, except in such country where one finds sheep and goats in the mountains, or game like caribou on broad, open barrens, most of our shooting is done under 100 yards.

The heavy-calibered bullet, with its larger hole of entrance, is more apt to leave a good blood track in case of an incorrectly placed shot. Also, the heavy, slower-moving bullet does not ruin meat as badly as some of these light, high-velocity bullets that can turn a hind quarter of a deer or even of a moose into a

blob. Just because a light, high-velocity bullet tears a large hole does not necessarily mean that it possesses sudden, violent stopping power. I refer you to any experienced African lion hunter to back me on that statement. And it is borne out in my own experience in Africa.

There is a great demand for small-bore arms and cartridges of high velocity, with light, expanding bullets. People seem to insist upon having rifles which will shoot flat over ranges greater than that at which the average hunter will be able to hit an animal, let alone kill it, and many of these bullets are so light and go so fast that they cannot hold together upon striking, or do the work properly. Many are very accurate, but often they wound game and don't bring meat to camp, however excellent some of them may be on the target range.

After all, game can be lost by any of us with any rifle; but when I saw a deer quartering away from me and put a certain well-known type of light bullet of about .25 caliber and with a muzzle velocity of somewhere around 2,800 f.-s., just in front of his right hind leg in the hope of raking forward, almost lengthwise, and then proceeded to follow that deer with much difficulty for about 200 yards, only to find him still alive, I had a revolting sensation, and fervently wished that I had had my old .38-55. Upon further investigation I found that my bullet had blown to pieces in the abdominal cavity, and had not even cut the diaphragm or gone into the chest cavity to the heart or lungs. That was the last time I ever used that particular type of small-bore cartridge, but there are thousands of them loose in the country—worse luck! I had tried out that rifle against my better judgment, simply because it was undeniably light and also beautifully balanced, and a joy to handle and throw to my shoulder.

Well, experience is a good school, and the next season I went to the other extreme and used an old Sharps; and when the smoke had cleared away I saw some heels kicking in the air—for just a kick or two—and I was not kidded any more in camp for using an old "coal-burner." In fact, some regret was expressed that the old Sharps rifle was no longer made.

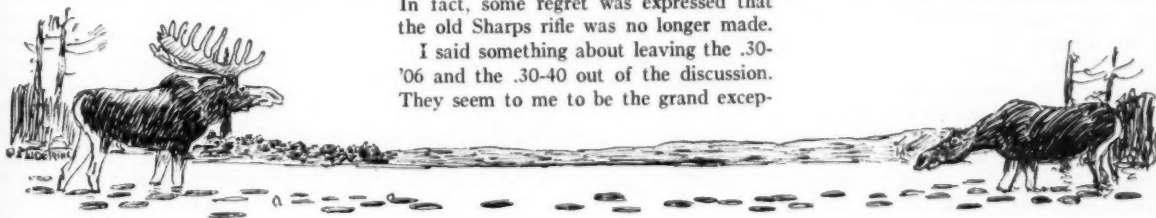
I said something about leaving the .30-'06 and the .30-40 out of the discussion. They seem to me to be the grand excep-

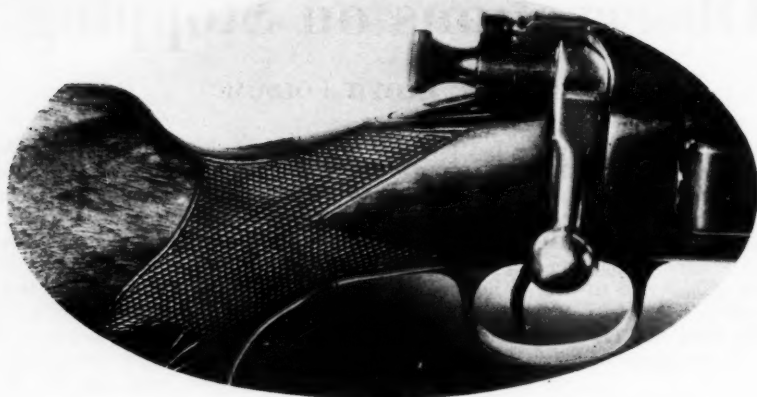
tions to what I have said against small bores. In fact, those two cartridges, along with the .35 Remington when loaded with full-weight bullets, are about as fine as any man could desire. They have real "wallop," and although the .30 Government shoots flatter than the others, either of the others is fine on the largest of our game; and in a number of instances our party successfully used the .30 Government and the .35 Remington on heavy African game, which is generally and rightly shot with considerably heavier rifles.

As for the .30-40 Krag, this cartridge is a rather old one and its popularity persists in many parts of North America, and justly so. The reason is simply that the 220-grain bullet is quite heavy in proportion to the bore, and although it hits very hard, the velocity is usually not sufficient to break up the bullet, which stays in a large animal in most cases, and mushrooms beautifully; and that is a hard combination to beat, particularly when hooked up with a quite fairly flat trajectory for those who need it.

Certain types of cartridges are unquestionably better than others; but naturally the man himself working the rifle is more important than the cartridge. He's got to be able to shoot reasonably well or he will lose game with the finest rifle. I have seen men spend a long time in our place of business selecting a rifle and going into all of the various weights and types of bullets, etc., and then go into the woods before they had even tried that rifle out at a mark, completely overlooking the necessity of getting to *know* the rifle. They may have bought the rifle simply because so-and-so said that such a rifle was a good one, and let it go at that, assuming that when the proper time came they could just pick it up and shoot like a frontiersman.

Recently, while I was writing this, an old-timer from Arizona, who is well known as a magazine writer and publisher of Western stories, dropped in at my office, and I showed him this article. He said he did not think it emphatic enough, but said "Amen" to it, just the same.





The Craftsman of Gold Hill

By ARTHUR T. BRICE, JR.

THREE miles as the crow flies, a little more by road, from Gold Hill, Oregon, is John Harrison's place. It is a 40-acre ranch situated on the bank of Gall Creek, and there is a cold spring and a good camping site about a mile off the main highway at the bend of the road.

Friend Harrison has been working over guns and their stocks for more than twenty years now, so after becoming acquainted with his work, and having found his place, I could not help but wonder what kept such genius hidden so far back among the hills. The answer is simply that he likes it there, and the ranch gives him something to do between gun jobs. The idea of a little gun shop right in Gold Hill on the main highway has a strong appeal at times, but then there would be rent to pay, which, with a recent high-school graduate in the family, could not be considered. Besides, someone once told John that if a man could make a good mouse trap the world would make a beaten path to his door. Which the world in its own good time and manner is proceeding to do.

The gun club down in Medford, Oregon, has found Harrison out, and every now and then that little line in "The Trading Post" which runs, "Guns restocked and engraved. Springfield Sporters, \$15," catches some N. R. A. member's eye. But here is one of the things that Friend John does, which is really what I started to tell

about. I give the instructions in as nearly his own words as I can recall them, and append three diagrams so that anyone with the requisite skill may try his hand at it.

This is the new method of remodeling a military stock to obtain just the desired length, drop, grip, and shape. In strength it is fully equal to the old way, and in appearance and the ease with which the desired results may be accomplished, it is greatly superior. The photograph (in taking which the photographer was put on his mettle to show the joint if he could, rather than hide it) gives an idea of the finished result on a Krag; but the method is, of

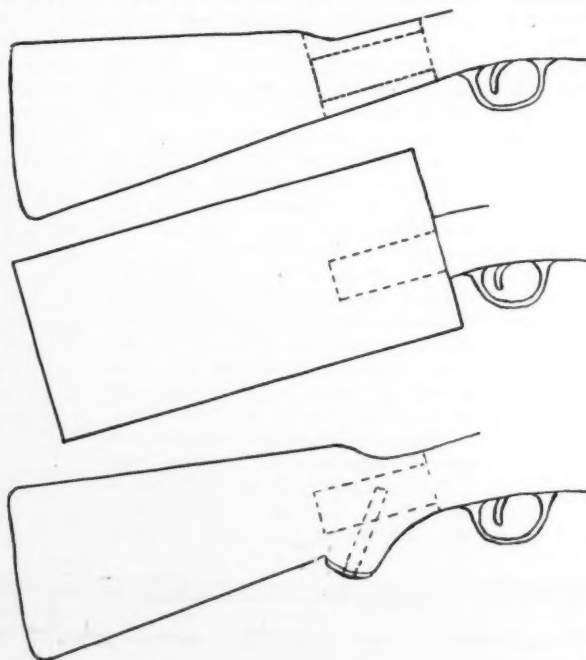
course, equally applicable to any other stock.

Cut the stock off at a point about $2\frac{3}{4}$ inches from the rear of the trigger guard. At a point $\frac{1}{2}$ inch from the trigger guard cut into form a shoulder all around, and shape the stub end of the stock into a round tennon $2\frac{1}{4}$ inches long, which is ample for strength. Bore a corresponding hole into the block from which the new stock is to be fashioned. The tennon should not be less than 1 inch in diameter, and if the old stock is thick make it $1\frac{1}{4}$ inch. Work the tennon down with chisel, file, and sandpaper to a tight driving fit.

Slightly undercut both edges at the joint so as to insure a close fit all around when the two pieces of wood are driven together. Use du Pont cement on the shoulder and outer edges, and Le Page's wood glue in the hole where no dampness can get to it.

Let stand for a day or two for the glue to set, and then shape up the new stock to the desired dimensions. After the grip is outlined, bore a $\frac{3}{8}$ " hole through its base well up into the tennon of the old stock, and glue and drive in a pin of any tough, seasoned soft wood, such as willow. The head of this pin is subsequently hidden by the grip cap.

The greater part of the joint in the stock is covered by the grip checkering, which renders it almost invisible.





Eastern Regional Police School and Police Matches

AT the invitation of Honorable Gifford Pinchot, Governor of Pennsylvania, and with the Pennsylvania Highway Patrol under command of Captain Wilson C. Price, Superintendent, acting as host, the first Eastern Regional Police School and Police Matches were held at Harrisburg, Pennsylvania, August 15th to 20th inclusive.

Approximately one hundred and fifty police officers, sheriffs and other peace officers representing twenty-seven police departments, from nine different states and the District of Columbia, were present during the period of instruction and the police matches.

The Camp Commandant, Lieutenant John Grance, Pennsylvania Highway Patrol, organized a miniature Camp Perry, erecting forty tents in which the various police officers were quartered, cots, blankets, mattresses and the usual camp equipment being issued to each tent. Immediately upon arrival all competitors reported to the Camp Director for registration and assignment to quarters, these being furnished without charge, and a caterer operated so that the students might eat at the camp, the average cost of meals being less than one dollar and a quarter per day. Commercial Row included the various arms and ammunition companies' displays, as well as police equipment, so that the police officers had the opportunity of seeing and handling the latest developments.

The Police Division of the National Rifle Association arranged the program for the school, so that revolver instruction was directly in charge of Lieutenant R. M. Bair, Ordnance Reserve, U. S. A., Revolver Instructor and Ballistician for the Pennsylvania Highway Patrol. Personal Combat was under supervision and instruction of Corporal J. Davies, of the State Highway Patrol, who demonstrated

various holds, including wrist and arm-lock and jiu jitsu tricks and how they might be used effectively in overcoming a person who resists arrest.

Major A. F. Spring conducted the instruction to the students on gas, gave lectures on the various types of chemicals used to create smoke screens and further demonstrated his points by having the pupils go through smoke screens and tear gas with and without gas masks.

The students were given instructions in the various subjects each day over a four-day period, from eight a. m. to eleven-thirty and from one-thirty to five, the last two days of the week being devoted to police matches, individual and team, as indicated by the following scores:

INDIVIDUAL FIELD FIRING MATCH

(67 Entries)

Course of Fire—Five shots at bobbing targets at fifty yards and five shots at running-man target at twenty-five yards.

Name	Organization	Bob.	Run.	Total	Medal
1. Dunn, T. S.,	Baltimore Police Department	24	23	47	gold
2. Sackett, A. V.,	New York City Police	16	24	40	silver
3. Kunkle, W. B.,	Pennsylvania State Police	22	18	40	bronze
4. Sedlock, M. J.,	Pennsylvania State Police	21	18	39	"
5. Morrison, E.,	Pennsylvania State Police	23	16	39	"
6. Schuber, A. P.,	New York City Police	21	17	38	"
7. Widson, B.,	Pennsylvania State Police	14	23	37	"
8. Migliorini, C.,	New York City Police	17	20	37	"
9. Davidson, K.,	Haverford Twp., Pa.	21	16	37	"
10. Whitcotton, L. N.,	Pennsylvania State Police	23	14	37	"

TEAM FIELD FIRING MATCH

(10 Entries)

Team	Bob.	Run.	Total	T. Total	Medal
1. Baltimore Police Department	139				silver
2. Pennsylvania State Police	138				bronze
3. Washington, D. C., Police	136				bronze
4. New York City Police	125				
5. Maryland State Police	110				
6. Rochester, New York, Police	99				
7. Haverford Twp. Police	83				
8. Lower Merion Police Department	79				
9. Harrisburg City Police	58				
10. Reading Police Department	52				

INDIVIDUAL POLICE PISTOL MATCH

(75 Entries)

Name	Organization	50 yds.	25 yds.	25 yds.	Total	Medal
1. Wendel,	New York City Police	90	94	91	275	gold
2. Kunkle,	Pennsylvania State Police	88	91	90	269	silver
3. Clelland,	Rochester Police	83	95	88	266	bronze
4. Dickerson,	Baltimore Police	88	92	86	266	"
5. Plummer	Maryland State Police	79	90	96	265	"

POLICE PISTOL TEAM MATCH

(11 Entries)

Range—25 yards

Team	Slow Time	Rapid	Total	T. Total	Medal
1. New York City Police	1073				silver
2. Baltimore Police Department	1065				bronze
3. Pennsylvania State Police	1045				bronze
4. Washington, D. C. Police	1033				
5. Rochester Police	1016				
6. Pennsylvania State Police #2	1000				
7. Maryland State Police	984				
8. Haverford Twp. Police	963				
9. E. Cleveland Police	941				
10. Harrisburg City Police	815				

The Colt Patent Fire Arms Manufacturing Company donated two Colt Shooting Master, .38 Special Revolvers, one going to the high individual police officer in the Police Pistol Match, this being won by John Wendell, of the New York City Police, and the other to the high tyro police officer, which was won by Corporal Plummer, of the Maryland State Police.

To vary the monotony of study period each evening there were baseball games, tour of inspection through the training school of the Pennsylvania Highway Patrol and an exhibition by the Motorcycle Stunt Team of the Highway Patrol on the riding course east of the Patrol School.

The Eastern Regional Police School and Matches will be an annual affair and all superintendents, commissioners, and chiefs of police departments in the United States are welcome to send as many of their police officers to this school for instruction as they care to.

Improving the Mannlicher

By R. E. WILLARD

BELIEVING that the average rifle-shooting enthusiast is always on the lookout for any improvement that might tend to help him better existing conditions, the writer will try to explain what he considers to be several improvements of major importance to the Mannlicher-Schoenauer sporting rifle. These improvements can be added to the Springfield and Mauser rifles also.

I have always had a liking for the light, small-caliber, short-barrel 6.5-mm. Mannlicher. It has proven amply powerful for deer and black bear, and other small game. It is light enough to pack all day, and small enough to handle quickly. But its flat bolt handle close to the action is not easy to grasp; the safety device has always been a clumsy affair, and the sight radius is all too short for quick and accurate work on game. It doesn't take long for deer to get out of sight in heavy cover, and I have seen a good many for too short a time to get the sights on them.

So I finally decided the best thing to do was to eliminate the undesirable features, and be satisfied. I tried several gunsmiths, but did not get any encouragement. Finally I talked to Mr. Fred Surkamer, of Chicago, who is of the older school of gunmakers. His keen delight is in solving difficult problems in gunmaking, and he agreed to get busy and settle the matter for all time. Being himself a hunting enthusiast and a good shot, he knew just where to begin.



From the photograph it will be noted that the bolt handle was slightly turned out, away from the action, and the lower end built up and grooved on the outer surface to make it easy and quick to grasp and operate. The safety was removed from above, and a new one built in at the rear of the trigger guard. This feature is also fast and is always right at the finger tips.

But the particular job was the rear sight. The knurled cocking piece was leveled off on top, and a block set on here, with a stem which projected into the hole in which the original safety operated. This block has a slot for the sight proper, and is built up like a sight disc.

The main part of the sight is a small tube about $\frac{3}{4}$ inch long and capped by a disc, the aperture of which is about $\frac{1}{32}$ inch in diameter. The front aperture of this tube is about four times the diameter of the eye aperture. The slope between apertures is gradual. This eliminates blurring and gives plenty of light even on dark days. The main feature of this sight is that it acts similarly to a small telescope. It is a great improvement over the ordinary peep sight, and gives a large field. Also, for the shooter whose eyes are not as keen as they used to be, it is a revelation in speed and clearness.

After getting the rifle back and trying it out on targets I was agreeably surprised to find that it handled like a different gun. I am certainly satisfied with it now, and I am sure there are a great many members of the N. R. A. who will be glad to know how a fine rifle can be made still finer.

An Accurate 7-mm. Handload

By PAUL C. NEULAND

THE 5-shot group shown in this article was shot from muzzle and elbow rest by Mrs. J. L. Orr, the wife of a shooting friend of mine. Except for one shot, this represents splendid accuracy of the load and rifle, and very fine holding on the part of the shooter, especially so because this was Mrs. Orr's first experience in shooting a rifle equipped with a telescope sight. The group was not selected from a number but was the first and only one shot.



This 7-mm. handload was assembled by myself, using 15 grains of No. 80 behind the Belding & Mull No. 288140 gas-check bullet sized to .288". This bullet weighs about 144 grains when cast 1 to 12, and they were seated out to almost touch the rifling. The powder charges were not weighed but were thrown with the B. & M. Visible Powder Loader. The bullets were selected for uniformity but were not

weighed, and the loading of the cartridges was done in the Model 28 B. & M. lever tool. Primers were the new Winchester Staynless Nonmercuric No. 115.

A word as to the rifle and its sighting equipment. It is a Remington 30-S Special fitted with a Hensoldt "Zielyt" $2\frac{3}{4}X$ hunting telescope with horizontal cross-hair and square-topped post. The scope mount is a Niedner low type, which is well adapted to the Remington action. The groove diameter of the barrel is .2845", this being a little smaller than the average run. The rifle being sighted to shoot 1 inch high at 100 yards with Remington factory 175-grain Express load, shot 12" below point of aim with this reduced load at the same distance. At 50 yards it shoots $2\frac{1}{2}$ " low. The firing pin travel on the 30-S Special is short and very fast, which is an aid to good shooting.

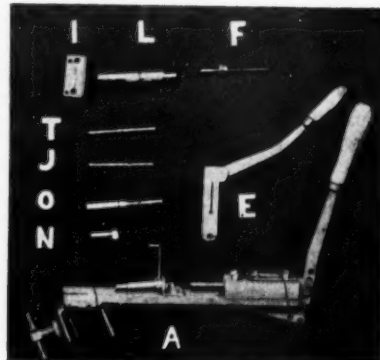
A Home-made Loading Outfit

Editor, AMERICAN RIFLEMAN.

DEAR SIR:

I am sending you a photo of a reloading outfit which I made.

The separate parts shown are as follows: *A* shows the set-up for repriming; *N*, bullet resizer; *O*, necking-down tool; *J*, muzzle-expanding plug; *T*, primer punch; *I*, bracket for holding; *L*, bullet-seating die; *F*, bullet-seating plunger; *E*, bullet puller.



The body of the tool is 11 inches long, and is made from $\frac{3}{8}$ " x 2" mild steel. The bracket for holding the shells has a gate on the bottom, hinged at one end, with a hole in the center for the old primers to drop through when decapping. The bullet-seating die is made from $\frac{3}{4}$ -inch cold-rolled steel. An old rifle chamber makes a good die. The necking-down tool is made from $\frac{5}{8}$ -inch cold-rolled steel. A drill was ground to the proper shape for recessing the bullet-seating plunger. The punches are made from $\frac{5}{16}$ -inch cold-rolled steel. The bullet sizer is used in the same manner as a shell when repriming, the bullet seater being employed to push the bullets through.

(Signed) J. T. TWIDWELL.

SPEAKING OF WEIGHT

(Continued from page 15)

bull moose and buck deer of two years or older may be killed, and in Maine, where the alert hunter steals through the timber with nervous finger on trigger, to be instantly ready for doe or fawn—not to mention the unwary guide who absent-mindedly flourishes a white pocket handkerchief. In Canada we hunt open, broken (very broken) country, over whose bogs, barrens and granite boulders the rifle is most comfortably carried slung on the shoulder; so what does it matter to the man who must be able on occasion to back-pack a heavy load, if his shoulder carries a rifle of 7 pounds, or one of 10? The 7-pound rifle is better for carrying, but the 10-pound one for steadiness in shooting.

There was a grocery scale in the base camp, and that's where the weighing fever began.

"Well, Sir," as Floyd Gibbons would say, the Sporter, with five cartridges, weighed 9 lbs. 9½ oz.; the Winchester, 8 lbs. 8½ oz. The Sporter barrel, action, magazine, with screws, made 6 lbs. 2¾ oz.; Winchester, 5 lbs. 12½ oz. The hand-made stock for Sporter, with Stoeger buttplate and pistol grip-cap, both trapped, high comb and full cheek-piece, horn tip, and purposely made as full as good lines would permit, went to 2 lbs. 7½ oz.; the Winchester standard factory stock, 2 lbs. ¾ oz. The Bastey sling-strap went to 6¼ oz., and the Sporter stock held small articles to the extent of 4 oz.

Back in Boston we did more weighing:

The Stoeger trapped buttplate weighed 2½ oz.; D. C. M. Sporter buttplate, 4½ oz.; Horn buttplate, 1 oz.; Jostam, rubber buttplate, 4 oz.; Stoeger pistol grip-cap with trap, 2 oz.; Horn pistol grip-cap, 89 grains, or about 1/5 oz.

We found that the amount of wood represented in the cheekpiece weighed 4 oz., and a tip of horn instead of plain wood added nearly 2 oz.

So it is very evident that all the refinements are luxuries which must be had at the expense of increased weight—the figured walnut itself is denser and therefore heavier than that used in the standard stocks. But, to the discriminating rifle owner, the refinements are worth their weight. At that, the desirable commercial Sporters for the .30-'06 are by no means featherweights, as we shall see:

SPRINGFIELD SPORTER	
Essential metal parts	6 lbs. 2¾ oz.
Hand-made stock	2 lbs. 7½ oz.
Sling, with swivels	8 lbs. 10¾ oz. 6¼ oz.
Five cartridges	9 lbs. ¾ oz. 5 oz.
Total weight	9 lbs. 5½ oz.

NATIONAL MATCH SPRINGFIELD

Essential metal parts	5 lbs. 13 oz.
Hand-made stock	2 lbs. 7½ oz.
Sling	8 lbs. 4½ oz. 6¼ oz.
Loaded	8 lbs. 10¾ oz. 5 oz.
Total weight	8 lbs. 15¾ oz.

WINCHESTER

Rifle, with sling	8 lbs. 3½ oz.
Loaded	5 oz.
Total weight	8 lbs. 8½ oz.

Sedgley makes a handsome, compact, well-finished sporter for the .30-'06, with Springfield action.

SEDGLEY

Rifle	8 lbs.
Sling	6¼ oz.
Loaded	8 lbs. 6¼ oz. 5 oz.
Total weight	8 lbs. 11¼ oz.

It is obvious that one must pay 6 ounces for the closer grouping Sporter. If that seems sheer extravagance to him, he can send his National Match or star-gauged Service Springfield to Sedgley for polishing and bluing and, at the same time, have Sedgley put on his ramp front sight. It will be a job to be proud of.

It is apparent, also, that if one is not satisfied with the standard stock and fittings, he must pay something further in ounces, which will bring the commercial rifles to the weight level of the specially stocked Springfields, and the matter is gone into in detail here in order that each individual contemplating restocking of Springfield or commercial arm may determine for himself which of the refinements are essential to his happiness, and what each will cost him in weight. For example, if he feels that he must mount a scope, he may decide that he can make a trade for some part of that extra pound. The weights given may vary slightly in individual arms, but will be found approximately correct.

TRY IT YOURSELF

(Continued from page 11)

a noise, for that is man-nature. They are equally sure to begin telling what wonderful shots they have made, and how you can improve your shooting. Just invite 'em to take a string or two. It will be well worth the shells. You may see some good shooting, though the odds are against it; but even if not, they probably will not bother you again. Either way, you win.

One man was telling me how he got his deer. He was a truthful chap, and the deer was there—a nice five-tiner, dead past dispute—to back him up. He told me in detail how the deer burst from the brush, how it ran across an open place, how he upped with his gun, how far away it was, and just how much front sight he

took above the rear notch—I lost the rest of the story, for I was busy considering the difference between some kinds of shooting and some others. I came back in time to hear him say triumphantly: " . . . and it was just 193 paces." Uh-huh. Did you ever pace distance over a rocky hillside, and then measure it afterwards with the tape?

But now my good luck led me among real riflemen. Of course that meant a real rifle, and decent cartridges, and a little coaching. Then possibles began to happen—occasionally and even oftener. Finally, just as this objectless paper-punching began to be boring, the Prone Tyro Indoor bobbed up, just my size. Well, why not?

Now that match taught me something the books hadn't. It had not occurred to me as among the possibilities that a grown man, reasonably dry behind the ears, a fellow who in the course of his profession was accustomed to have life and death more or less dependent upon his judgment, an amateur soldier who had spent 4½ years in a certain war and had people throw things at him, a rolling stone who had his moments by land and sea when he wondered whether—well, you know how it is. You've been there, too, and you'd swear that nobody could be so silly as to let himself be upset by a little thing like shooting for official record. But I did. It was one of the three or four most humiliating experiences I have ever gone through; but, in truth and fact, I had buck fever. I would as soon have expected to have chickenpox again. Shooting for fun, or, at most, with a little bet on with a friend, ought to be the same as shooting for official record, but it isn't.

Furthermore, I picked up a few other little pointers, such as that an indoor range is not quite the same as an outdoor range, and neither is the artificial light or natural daylight quite identical; further, that black spots on white paper and on cream paper look just a trifle different; and, worst of all, that when there are five bulls on a card, only two shots, no more and no less, should go into each one. Elementary, my dear Watson? Quite so. But there is a certain category that prefers to learn in the school conducted by Madame Experience, and I have found the N. R. A. postal matches a very good class in that school.

That brings me to the point of what I am trying to say. I believe that anybody, anywhere, with nothing more than a rifle, a safe place to shoot, a manual, and the determination, can make a passable shot out of himself. Perhaps I am not entitled to have an opinion, still less to express it; but the fact is that I have a percentage medal. (I'm going to have a better one, one of these days, and that will be due to

coaching. If you can get coaching, so much the better.) When I look back over all those wasted years when I might have been having oodles of the very best kind of fun, because I labored under the delusion that rifle shooting required illimitable amounts of money, and fearfully and wonderfully constructed places called "ranges," and all sorts of elaborate fixings, it almost makes me want to tear out my few remaining hairs.

If you want to shoot, get a safe gun, a safe book, and a safe place, and go to it. Never mind if the thing won't make better than 83 per cent. Eighty-three with it, then, is 100 per cent. By the time you have learned to hold and squeeze for, say, 70 per cent, you will be all set to go on.

Just a word, though, about one mistake that I nearly fell into. You practice, alone or with friends, till you average better than 95 per cent. Naturally, you feel that you needn't go to the bother, or expose yourself to the publicity, of winning the dinky little medal. Perhaps so; you may be different. But I certify that in my case the biggest difficulty lay in that very publicity. At the back of your mind all the time is the thought that the whole thing will be printed, that Dick Smith out in San Francisco, Hank Jones up in Portland, Maine, and all your friends and acquaintances scattered in between, will be saying, "Did you see what old Bill did in the Prone Tyro? Made all of 360-odd out of 400, no less! Haw, Haw!"—and then you squirm, and make a 7. Maybe you aren't that way, but I suggest that you will never be sure until you have done it. Try it, brother; call me a fool if you want to, but just try it yourself first, just once.

In any case don't keep the kids waiting. Read the manual, and get them started. Tell 'em what the book says, and insist on the safety rules to the letter. That's all to start. For the rest, they'll learn—and they'll teach you.

SPEED WITH THE REVOLVER

(Continued from page 10)

sent me some very fine groups pretty fast time, all within a 2½" circle at 18 feet, double action. So there you are.

Automatic pistols are not included in this discussion, but a few general remarks may be of interest. We have electric contact devices for accurately timing the shots from these guns, and many of the claims for their superiority from various angles are not borne out in practice. I have made many experiments to satisfy my own curiosity about such things. But I have seen some very fine work done with automatic pistols, and I personally have nothing to say against them. I have had

the pleasure of watching J. H. FitzGerald, of the Colt Company, do some wonderful fast work with them in the way of quick draw and hit, as well as fast, accurate shooting.

The new Smith & Wesson .38-44 target gun with 6½" barrel, used with the new .38-44 high-speed cartridge for 300 and 500-yard shooting, is developing some very interesting angles. We have secured some very gratifying results and pleasant surprises with this combination. The possibilities at 300 yards were not to be even dreamed of a short time ago. The results we have so far been able to get at 500 yards constitute the greatest surprise I have ever had in the revolver shooting game. A new field of interesting development has been opened for us.

OLYMPIC SWAN SONG

(Continued from page 14)

free rifle arms, some of them 16 pounds in weight or more.

The official scores and ranking were as follows:

OLYMPIC RIFLE MATCH—TENTH OLYMPIAD, LOS ANGELES, CALIF.

August 13, 1932

Name	Country	Score	Stand- ing
Bertil Vilhelm Ronnmark—Sweden.....		294	1
(won shoot-off)			
Gustavo Huét—Mexico.....		294	2
Zoltan H. Soos-Ruszká—Hungary.....		293	3
M. Zorzi—Italy.....		293	4
Gustav Emil Anderson—Sweden.....		292	5
William Harding—United States.....		292	6
Francisco A. Real—Portugal.....		292	7
Karl August Larsson—Sweden.....		292	8
Julio Castro Rosario—Spain.....		291	9
Carlos Guerrero Martínez—Mexico.....		290	10
Tibor Tary Tarits—Hungary.....		289	11
Gustavo Salinas—Mexico.....		289	12
Ugo Cantelli—Italy.....		288	13
E. Shumaker—United States.....		288	14
Rom Stanifer—United States.....		287	15
A. Daneri—Argentina.....		286	16
Amedeo Bruni—Italy.....		286	17
Antonio us Lemberkovits—Hungary.....		285	18
Manoel Costa Braca—Brazil.....		284	19
Manuel da Silva Guerra—Portugal.....		282	20
Antonio M. Guimaraes—Brazil.....		282	21
Sigfrido Vogel—Argentina.....		281	22
Jose M. Andrea Ferrera—Portugal.....		279	23
Jose M. O Da Salvo Castro—Brazil.....		277	24
Buenaventura B. Carbonell—Spain.....		274	25
Manuel Corrales Gallego—Spain.....		268	26

Certified correct from the records of Statistical office. Representing National Rifle Assn. of America L'Union Internationale de Tir.

Principal Contributors in This Issue

ED MCGIVERN, of Lewistown, Montana, has a very interesting background. His experience with firearms goes back to the old muzzle-loader days. For the past twenty years his hobby has been superspeed work with the revolver on all kinds of targets, both stationary and moving. He is not connected with any manufacturer, but carries on his work in his own way and at his own expense. He has a complete indoor range and research laboratory, and developed the electrical timing apparatus used in his speed work.

DR. WM. H. BRADDOCK writes: "I have held down jobs in several different

countries. Have sailed my private junk (Oriental pattern) on the Japan sea, and been dismasted in another piece of junk on the coast of Labrador. Was nearly lost once with a dog-team in that same neighborhood, and entirely lost more than once without one in Boston, Brooklyn, San Francisco and way-stations. I have washed dishes, sailed before the mast, taught school, opened a belly, married and raised a small family, and found life all too short for all the things I want to do."

COUNT VASCO DA GAMA has the second part of his article on rifles for dangerous game in this issue. Count da Gama has hunted in both the plains and forests of Africa, and considers plains shooting to be child's play compared with the more difficult and dangerous sport of hunting elephants in the forest.

DR. A. A. MERRILL lives in Boston. He is a dentist by profession, and an outdoorsman, wanderer and rifleman by nature. We quote from his letter, as follows: "I seem to be just one of those nuts who have an innate love of firearms. Have a camp up in Canada, and go up moose hunting whenever I have the opportunity. Don't care much about killing things, but do like to explore and gumshoe around to see what can be seen. Member of the Massachusetts Rifle Association."

L. ERIC KROGIUS is a Finlander, and by profession a mechanical engineer of unusual educational background. His letter is very interesting, and we quote from it in part: "My private hobby is shotguns, and shotgun ballistics and experimenting."

"I can say that I am one of the foremost duck hunters of this country, which is a wild fowl country par excellence, having 65,000 lakes. I was the first one to introduce American duck-shooting over decoys."

H. LLOYD FOLSOM, of H. & D. Folsom Arms Co., of New York City, began hunting big game, with a fairly powerful rifle, when he was eleven years of age. Most of his hunting has been in Nova Scotia, New Brunswick, Newfoundland, Wyoming and Idaho. Some years ago he spent seven months hunting in Africa. Mr. Folsom remarks: "This hunting from time to time has given me a few ideas on the subject of rifles which a charge of dynamite could not knock out of my head."

ARTHUR T. BRICE, JR., is as ardent a gun-lover as one is apt to find anywhere. Two summers ago he spent several months in Washington visiting his parents and making arrangements for a new business connection, and in speaking about his next job he said that the first requirement was that it be located in a town or city where there was a live rifle club. He finally chose Palo Alto, California. In Mr. Brice are combined a scientific and studious mind with the generous nature and buoyant spirit of the outdoorsman.

Thanks, "Boston Herald" and Dahl

"**B**E Kind to Our Criminals" has for a long time past been the creed of the crank reformers, that enthusiastic and gullible class of "specialists" ready at a moment's notice to furnish a cure for any and all ailments of the world.

Pampering in jail, paroles, pardons, suspended sentences, babying, delays in trials which serve to increase the bravado and confidence of the criminal-defendant and disgust and discourage the law-respecting witnesses against him—all these have combined to make easier the road of the bandit, the housebreaker, the murderous gangster and all their insidious ilk.

Further to aid and abet the ready-to-shoot invader of home, store or office, the states of New York and Massachusetts have laws which declare that no citizen shall have, *even in his home or place of business*, a pistol without having a permit to possess it. Such laws have given rise to a most ridiculous situation: the arresting and punishing of citizens whose only transgression is that they had in their homes a pistol for which they had no permit. And usually discovery of the no-permit pistol has come after its owner has frustrated a robbery with it.

Early this year the General Assembly of New York State passed a bill which would have relieved the citizen of the time-losing, uncomfortable bother of going through the routine of obtaining a permit to keep in his home a pistol which he had possessed probably for many years. It was a splendidly constructive piece of legislation but the police commissioner of New York city was able to bring enough pressure to bear to have it vetoed.

Dahl, in a cartoon appearing in the *Boston Herald*, on August 29, caught and illustrated, with a deftness that cannot fail to impress, the farcical aspect of the situation, the side which shows the extreme humiliation and harassing which faces the man who uses a no-permit pistol to protect his home and the overbearing temerity of the burglar or gangster who must laugh to himself over the extremes to which a state will go to help shield him from the bullets of an intended victim who is denied the rights acknowledged him under the precept of law that "a man's home is his castle."

Again, our appreciation goes out to the *Boston Herald* and Dahl for so impressively showing up the situation in all its mournful (or laughable) colors!

NO PERMIT

By Dahl



COMING EVENTS

Eighth Corps Area "Little Camp Perry," to be held in conjunction with the Far Southwest Rifle, Pistol and Shotgun Matches at Fort Bliss, El Paso, Tex., September 26 to October 1. Besides a lengthy and attractive list of events, the Navy Cup, Cavalrymen's Cup in the President's Match, the Small-Bore Individual Short-Range Trophy and the Clarke Memorial Pistol Trophy will be contended for, having been assigned to the meet by the N. R. A.

Contact Dick Cunningham, Chamber of Commerce Bldg., El Paso, Tex.

Ninth Corps Area "Little Camp Perry" meet, the second for the area, will be held at San Luis Obispo, Calif., September 30 to October 2, with the Leech Cup and the Clarke Memorial Trophy, the latter for award to high civilian in President's

Match, assigned to the shoot. Besides .30-caliber rifle events, there will be small-bore rifle and pistol matches.

The Mistletoe Rifle Club, Okmulgee, Okla., will hold its first fall shoot on October 16. The matches will include the Dewar, Small-Bore Wimbledon, Schuetzen, 300-Yard Rapid Fire, 600-Yard Match, 20-Yard Pistol and Bobbing Target event. All matches will carry two medals, except the 600-Yard event, which offers an additional medal for high with Service rifle as issued and bobbing-target pistol match, which will divide 60 per cent of entry fees.

New York State Rifle Association will hold a small-bore meet at Camp Smith, Peekskill, N. Y., October 16 (10 a. m. to 4 p. m.) with 3 events carded: 50- and 100-yards match, iron sights, and 100-yard and 200-yard matches, any sights, all twenty-shot events; N. R. A. targets, N. R. A. decimal target in 200-yard match. Gold, silver and gold-bronze medals in all matches, and silver cup for grand aggregate.

The Metropolitan Rifle League, Inc., will hold a Qualification Shoot on October 2 and a 1,000-Yard Match on October 9 on the New York State range at Peekskill.

The schedule of the Illinois State Rifle Association for October calls for practice at 50 and 100 yards, small bore, on the 2d, 9th, 23d and 30th at Fort Sheridan. Legion State Matches are listed for October 16.

The Fort Pitt Rifle Club, Pittsburgh, Pa., has the following matches scheduled for October: 100-Yard High-Power Rifle Match, October 1; Running Deer and Rising Bear matches, October 8; Hunters' Running Deer and Rising Bear matches, October 15.

The Massachusetts Rifle Association's schedule for October follows: McGovern Cup Match, 200 yards offhand, military rifle, any iron sights, October 2; Old-Timers' Shoot, rifle and pistol, and black-powder ammunition, October 12; 25-Bird Trap Match, October 23; Davis Cup Match, 300 yards, sitting, slow fire, military rifle, October 30.

The Elizabethtown (Pa.) Rifle Club will hold its last outdoor small-bore rifle tournament for the season on October 15 and 16. The program will include individual and team matches at 50, 100 and 200 yards. A feature of local interest will be the Inter-County Championship Match. For further information, address O. H. Schwanger, secretary, Middletown, Pa.

REGIONAL SHOOT RESULTS

Due to delay in getting all bulletins, the results of the various regional shoots which have been held are not being published in this issue of "The American Rifleman."

Accounts of the different meets will, however, appear in the November issue.

WESTERN GUN SIGHT COMPANY CHANGES NAME

THE Western Gun Sight Company of Denver, Colo., will from now on be known as **REDFIELD GUN SIGHT CORPORATION**. There is no change in ownership involved and there will be no change in personnel or in the policies of the company.

Guns vs. Bandits

HOLDUPS have become rather commonplace in Los Angeles, but there is one factor that is playing a telling part in the campaign against the hoodlums: the armed citizen whose nerve and aim have spelled defeat for many of the stickup men.

"Witsell Ord, a bank manager of slight stature but firm jaw, braved odds of death stacked against him this afternoon and shot and killed two members of a bandit 'mob' which attempted to rob a Bank of America branch," the *Los Angeles Herald-Express* related on August 24.

It was a particularly nervy act on the part of Ord for he was "covered" by one of the bandits when he suddenly drew open a desk drawer, grabbed a .45-caliber pistol and, despite that his robber-guard started firing first, he succeeded in mortally wounding two and was himself uninjured.

Seven bandits were involved. Of these, two were

killed, four were jailed and one, at last reports, was still being sought by police. The *Los Angeles Examiner*, under a headline which said the killing "Bares Parole Abuse," charged that one of the slain men had "obtained his freedom through California's lax parole system."

Another recent instance in the West Coast city: Luther Thompson, a service-station operator, was held up by two men on August 21. Instead of complying with their demand to turn over the proceeds of the day's business to them and despite that he was under threat of a gun, Thompson made for his own pistol and opened fire, critically wounding one of the men.

Then on September 8, a colored robber was shot and killed in a running gun battle with police after he had been caught in a trap when he attempted to rob a chain-store market.

Commenting editorially on the affair, the *Marion Star* lauded Stover for an "effective contribution to the campaign against lawlessness, especially the steadily growing operations of armed robbers."

Instead of complying to a command to "put up his hands," under threat of a revolver, Albert Lay, of near Hillsboro, Ill., got his shotgun and, without any shots being fired, scared off his two molesters.

When three men who had held up a gasoline station in Memphis, Tenn., on August 23, returned to get a cap that was dropped in the raid which netted them nothing, R. V. Adams, who had been beaten on the trio's first visit, seized his pistol and fired, killing one of the men. Adams first called to the men to stop but they ignored his order.

A bandit tried to raid the home of Orion Torrence in Gibson City, Ill., on August 8, but was frustrated by the prompt action of Mr. Torrence, who surprised him thrusting a revolver against his ribs and telling him "to travel." The man joined two companions in a machine outside the house, the three making their escape.

Roy Benosky, proprietor of a fruit stand near Toledo, Ohio, frustrated a holdup on August 12 when he reached for his unloaded revolver as two men sought to rob him. The two holdup men fled to their machine and escaped.

B. G. Kidd, of Knoxville, Tenn., drove off a colored prowler who attempted to break into his home, firing three shots at the would-be robber, on August 9.

On May 24 a lone bandit held up the Merrimack State Bank at Merrimack, Wis., and when he was captured within three hours after the robbery, it was found he had one bullet lodged in his shoulder and three minor flesh wounds, the result of the marksmanship of the vigilantes who gave pursuit. The machine he used had 23 bullet holes in it, both rear tires were shot up and the gasoline tank was perforated. He started a 35-year prison sentence 48 hours after the burglary.

"As they [the bandits] become bolder they are ignoring the factor of numbers. Apparently they are concluding that a crowd, however large, can be cowed by a show of force, and that the chance individual who happens to be armed and is ready to resent robber orders is negligible. . . .

"Robbery is now aggressive in this country to the point that it has extended the contempt it has long felt for the forces of law to the public itself. And America is going to find that these murderers, the pets of sob artists and official pardon boards, will force the fighting."—From editorial in *Wichita (Kans.) Eagle*, July 28.

A movement to write into the Nebraska statutes a "gun permit" law has been started by business men of Grand Island with the idea of providing defense for civilians against outlaws. The law would be fashioned principally after the Iowa law which sanctions the issuance of permits to carry pistols to citizens of peaceable, sober habit, good character and of reasonable proficiency with weapons.

J. E. Ridsen, Bureau of Investigation, Department of Justice, Des Moines, Iowa, has advised the sponsors of the Nebraska movement, in regard to the Iowa law, that he personally feels every law-abiding citizen should be permitted to carry a gun for practically all the crooks are armed at all times. It is pertinent that daylight holdup insurance for banks in Iowa is only \$1 per \$1,000 while in Nebraska the rate is \$4.80.

MASSACHUSETTS ORGANIZES STATE ASSOCIATION

THE agitation for a State Rifle and Pistol Association which has gone on in Massachusetts over a period of two years came to a head at a meeting held at Camp Curtis Guild, Wakefield, on the evening of the first day of the United Services Matches, August 7.

The meeting was largely attended and organization of what will be known as the Bay State Rifle and Pistol Association was enthusiastically carried forward. Representatives were present from the following clubs and organizations: American Legion, Arlington Rifle Club, Army and Navy Club, Attleboro Rifle Club, Boston Police, Boston Rifle and Revolver Club, Cambridge Post A. L., Commonwealth Rifle and Pistol Club, Everett A. L., Lynn A. L. Post 291, Lynn Rifle and Revolver Club, Massachusetts National Guard, Massachusetts Rifle Association, Massachusetts State Police, Melrose Police, Middlesex Rifle Club, Southbridge Rifle Club, United Services of New England, Wood End Rifle Club and Worcester Rifle and Revolver Club.

The aims and purposes of the proposed Association were sketched briefly by the chairman, Z. Cranston Smith, and Dr. A. A. Merrill. The state will be zoned according to the density of its known shooting population, the activities of each zone to be properly coordinated so as to give the fullest amount of shoulder-to-shoulder competition and cooperation with other zones and bring out the possibilities of the clubs and individuals more remote from the center of greatest density.

Measures will be taken to encourage closer relationship between rifle and pistol-shooting organizations and shotgun and sportsmen's clubs generally. The closest possible association will be promoted between civilian, National Guard, and Regular Service organizations. Any proposed legislation affecting the welfare of shooting in Massachusetts will be carefully scrutinized and given systematic action when expedient.

"A burglar frightened Mrs. James Noel in her apartment early today and the police came and arrested her husband.

"The reason was that he joined in the search for the burglar with a small pistol, for which he had no permit, in his hand.

"Magistrate Ford held him for Special Sessions in West Side Court today on a charge of violating the Sullivan law."—*New York Sun*, August 24.

Commenting on the foregoing item, a New York citizen writes in: "Freedom for the crook; tyranny, injustice and oppression for the honest citizen who lacks political 'pull' to get a permit to defend himself against politicians and other burglars. What kind of a President would the man make who deliberately permits such outrages to continue and is directly responsible for continuance of this iniquitous injustice and unconstitutional deprivation of a 'free' citizen's rights and privileges? How long must we stand this?"

In Dierks, Ark., J. L. Keener, vice-president of the Bank of Dierks, who learned about firearms during the World War, wounded two of three bandits who robbed the bank on August 23, causing the three to surrender an hour later after a posse of officers overtook them. Keener, who made his expert rating in the war, started firing as the bandits drove off from the bank with the bank cashier as a hostage.

One man was killed, another was not expected to live and a third was arrested after a holdup of Nicholas Molnar, a farmer, living 2 miles from Ringoes, near Trenton, N. J., on August 21. Molnar, as he was entering his home ostensibly to comply with the demands of his attackers for \$500, was fired upon and then he returned the fire with a shotgun, hitting two of the men and causing them to surrender. The robbers were armed with a sawed-off shotgun and a revolver.

Isaac W. Turner, White Plains, N. Y., shot into the air when he suspected the "business" of a man who had clambered up the fire escape of an apartment building where he lives. Uncertain as to whether the man was a tenant who had forgotten his key, Turner did not aim to hit but the shot fired had the effect of sending the prowler scampering for safety and abandoning his apparent robbery attempt. Mr. Turner is a member of the N. R. A., a pistol shot of note and was active a few years ago in helping in the formation of the Westchester County Police Revolver Association.

Three armed bandits robbed a grocery store in Marion, Ohio, on August 20, but their escape sent all three to a hospital with bullet wounds suffered at the hands of Ashworth Stover, manager of the store. They were captured 5 miles from the city by Police Chief W. E. Marks 25 minutes after the crime had been committed.

Fortunately, in Massachusetts there are already large and successful shooting organizations which function smoothly and well. The splendid United Services of New England annual matches at Wakefield are well representative of our rifle and pistol shooting.

The speakers at the meeting—including Maj. Gen. W. E. Lombard (for United Services of New England), Col. C. C. Stanchfield, Lt. Col. C. D. Berg, Lt. Col. Duncan Stewart (for M. N. G.), J. H. Pembroke (for the American Legion), Maj. David L. S. Brewster and Captain Richards (for the Marine Corps), Maj. H. R. Marshall (for Ordnance, M. N. G.), Capt. Louis D. Lutz and Captain Heaton (for Boston and Melrose Police), Capt. C. J. Van Amberg (for the Department of Public Safety, Massachusetts State Police), and others who represent the various interests which combine to make these matches so successful—all pledged support and encouragement for the new state organization. C. B. Lister, N. R. A. Secretary, gave a résumé of support and assistance to be expected of the National Rifle Association.

A tentative scheme of organization was adopted and officers elected: Z. Cranston Smith, president; W. L. Hart, vice-president in charge of civilian shooting for eastern Massachusetts; George L. Cutting, vice-president in charge of civilian shooting for western Massachusetts; Col. C. C. Stanchfield, vice-president in charge of National Guard and Service shooting; to be appointed, vice-president in charge of sportsmen's clubs; Capt. Louis D. Lutz, vice-president in charge of police; M. W. Burlingame, vice-president in charge of publicity; Carl Taylor, vice-president in charge of junior activities; Capt. A. E. Spooner, executive officer (three assistants to be appointed); Dr. A. A. Merrill, 62 Charles St., Boston, secretary; A. Masterton, treasurer.

Ten delegates will be appointed as zone directors on a plan similar to that of the American Legion. Accredited delegates from member clubs will be appointed by them as voting representatives at the next annual meeting, on the first day of the United Services Matches of 1933, to be announced later.

Immediately following organization, E. E. Cook, state secretary of the Connecticut Association, and E. F. Walker, state secretary of the Rhode Island Association, rallied around with helpful suggestions and words of cheer and encouragement for the new association. Lt. Col. C. E. Savage had previously assured us that we would meet with the fullest cooperation from the Maine State Association.

The outlook, then, is to the effect that not only shall we be able to bring out and more closely coordinate shooting activities in our own state, but the prospect is extremely bright for interstate cooperation in New England. There has already been proposed an annual team competition, to be fired alternately in the four New England States which now have state associations—Maine, Connecticut, Rhode Island and Massachusetts—which will certainly be of mutual benefit and advantage.

In the meantime, every effort will be directed toward formulation of a general shooting program in Massachusetts which will include the clubs and individuals who have heretofore not had the opportunity of general participation. The center of shooting density in Massachusetts is in the vicinity of Boston, and in that district shooters are readily able to get together. By means of a central organization represented in the various districts, opportunities will be multiplied for shooters of the other districts in the state to have more competitive firing and the building of that fraternal feeling which is one of the best incidentals of the shooting game.

A. A. MERRILL.

W. W. MILLER, Sr.

THE grim reaper has claimed another well-known American rifleman, William W. Miller, Sr., of Shillington, Pa., who was the star marksman of the University Rifle Club of Reading and for many years one of the best all-around shots with rifle and shotgun in the country.

"Billy" Miller, good natured and full of humor, may be known best to others than his intimates as the second high man on the United States Dewar Team of 1926, when only Virgil Richard was able to better his score. He was also high man on the first Pennsylvania State Civilian Small-Bore Six-Man Team to win the Col. John Caswell trophy, firing a score of 398 x 400 under very difficult conditions at Camp Perry.

His military rifle shooting career can be traced back to 1918, when he was a noted slow-fire shot on the Pennsylvania Civilian Team at Perry and Caldwell. For many years he was known as the highest-average man on the University Rifle Club team. He was always a good offhand shot and in addition was one of the most respected live-pigeon shots over the traps in Pennsylvania and also noted as a clay-target expert.

Miller was also a manufacturer and inventor of ability. During the World War he made dozens of intricate and expensive sights for 3-inch field guns for

the United States Government. He was the originator and manufacturer of the micrometer known generally as the O'Hare micrometer, and he also invented the Miller palm rest for free rifles, and a number of other rifleman's accessories.

C. S. LANDIS.

CLUB CHANGES NAME

AFTER a most eventful and pleasant career since its birth, the Monticello Rifle Club, 130 Monticello Ave., Jersey City, N. J., will now cease to be known by that name. A new charter has been secured from the N. R. A. and henceforth the club will be the "Jersey City Rifle Club."

When the original name was adopted a number of years ago, the founder had no idea the organization would become known throughout the state; consequently, a local name was chosen, which to out-of-towners is insignificant and obscure.

WIN DEWAR, LOSE RAILWAY TROPHIES

PRELIMINARY bulletins on the Dewar Trophy and International Railwaymen's matches indicate that the United States was the winner in the former match and the British in the latter.

The scores, as shown by the unofficial reports, were:

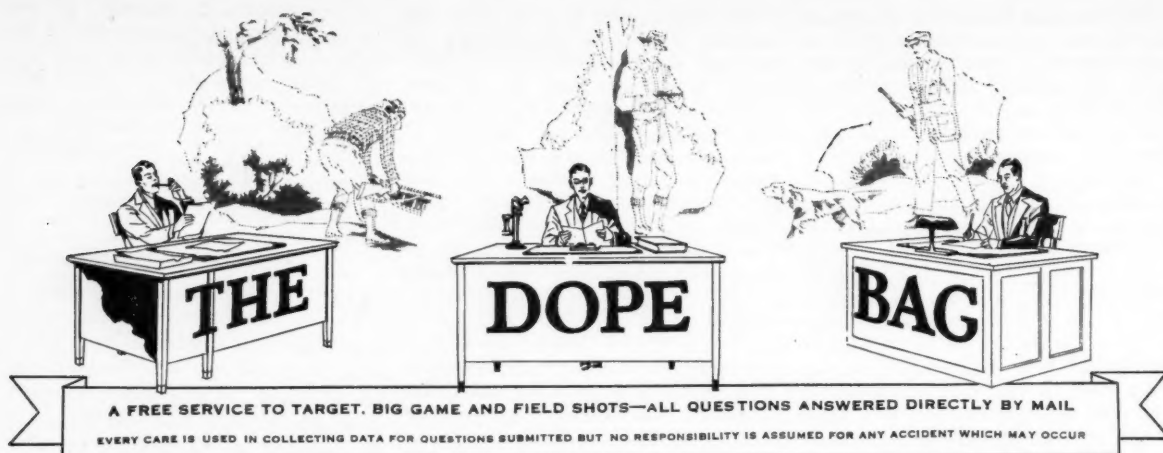
Dewar Match: United States, 7,872; Great Britain, 7,838.

Railwaymen's Match: British, 7,792; United States, 7,741.

On the American team, J. F. Kling, of La Crosse, Wis., was high individual in the Dewar Match with 398, and Gail Evans, of Steubenville, Ohio, was high in the Railwaymen's Match with 397. F. J. Surridge was high British individual in the Dewar with 397, and H. W. Johnson in the Railwaymen's Match with 398.

The British teams fired their scores September 12 and the American teams fired their scores on September 5 at the Fifth Corps Area Regional Meet at Camp Perry. E. M. Farris, Portsmouth, Ohio, was captain of the American Dewar Team and F. J. Paffe, of St. Augustine, Fla., was captain of the Railwaymen's Team.

After official confirmation of the scores, complete bulletins of the matches will be published.



The Strength of Black-Powder Handguns

SINCE W. A. Wright's article, "An Old Revolver Modernized," appeared in the July issue of *THE AMERICAN RIFLEMAN* there has been a question raised as to the advisability of using modern smokeless ammunition in old guns built for black powder. The question, is how strong are these old revolvers?

On general principles, at least, a gun editor must confine his recommendations to loads which are standard for the arm in question. Because the cartridge arms or breech-loading handguns manufactured prior to 1890 were not specifically made for the use of smokeless powder, the safest advice would be to use only black-powder loads in such arms. Even so, improper loading of black powder could conceivably wreck a worn or rust-weakened gun. I have in mind a full load of very fine-grained or dustlike powder and a heavy, oversize bullet. No matter what type of components are used, intelligence as well as care must direct the loading.

It might be said that these old guns, made of plain carbon steel in .44 and .45 caliber, were built for a safe working pressure of 8,000 pounds, or similar to that of our modern upland shotguns. It is not certain that this definite pressure figure is useful as a basis for comparison with modern handguns. It is certain that many of the old guns were very strong and had a margin of safety in excess of their requirements.

C. L. Quick, who owns one of the largest and most comprehensive collections of cartridges and old catalogs and other relics of the black-powder period, states that the Remington cap-and-ball revolver "was the strongest beyond a doubt, while

Savage had the best system to prevent escape of gas." Also: "Starr had a well-built revolver." There were so many and various Colt cap-and-ball revolvers converted to cartridge calibers that no one can hope to account for them. Before passing to the cartridge arms of the early '70's it is interesting to observe that R. F. Sedgley, Inc., has successfully converted a number of the Remington cap-and-ball revolvers to the modern .22 Hornet caliber, developing a muzzle velocity as high as 1,625 f.-s. with the .45-grain bullet in an 8" barrel.

About 1870 the Service revolver was the .44 American Army revolver, bored and chambered for the .44 S. & W. American C.-F. cartridge, .419" bore, grooves .006 inch deep, and 5 lands with one turn in 20 inches. It was loaded with a 218-grain lead bullet driven by black powder at 650 f.-s. muzzle velocity.

About 1873, or when the Single Action Colt came out, the heaviest modern .45 Colt load, or 40 grains F.F.g. black powder, was introduced with it. The modern .45 Colt smokeless cartridges are weak in comparison. The modern Remington ballistics are: 250-grain bullet, 40 grains F.F.g. black powder, 910 f.-s., and 460 ft.-lbs. Another early .45 Colt load was 38 grains F.F.g. behind a 255-grain bullet, developing 770 f.-s. Later the load was reduced as will be noted.

About 1875 the cavalry of Russia was supplied with break-open, top-latch Smith & Wesson revolvers chambered for the .44 S. & W. Russian cartridge, loaded with a 246-grain bullet and 23 grains black powder to give a muzzle velocity of 830 f.-s. Some of these Russian Model revolvers were also furnished chambered for the .45 Colt cartridge; but the only

.45-caliber handgun regularly manufactured by Smith & Wesson was the .45 Schofield. To quote a recent letter from the makers:

"The .45 Schofield was the Model No. 3 .44-caliber Single Action Russian with the Schofield patent barrel catch and chambered for the .45 S. & W. cartridge with a 250-grain bullet and 30 grains of black powder. The barrel reaming for the .45 S. & W. Schofield cartridge shows .436 inch plus or minus .001 inch, and the rifling .448 inch plus or minus .001 inch, with grooves and lands equal, and the twist 1 in 24 inches."

This .45 S. & W. Schofield was one of the strongest black-powder guns. The Single Action Army Colt (in the Service until 1892) was another. The standard .45 S. & W. bullet (250 grains) developed 710 f.-s. muzzle velocity. The .45 Colt Government cartridge, loaded by the arsenal and used interchangeably in both guns, had a 230-grain bullet, 28 grains black powder, and it developed 730 f.-s. muzzle velocity. The standard .45 Colt case in use today is slightly longer. I still have a few ".45 S. & W. Schofield" black-powder cases which were reloaded more than a dozen times with heavy smokeless loads and fired in one of the old black-powder Single Action Army Colts. This old Colt, No. 3024, had 6 very narrow lands, with a bore diameter of .4491 inch and a groove diameter of .4546 inch. The .45 S. & W. Schofield factory loads were very accurate in this gun.

The Single Action Colt revolvers below serial No. 160,000 were not guaranteed when used with smokeless powder. Those above that number were made for smokeless ammunition, or for a safe working pressure of 14,000 pounds, and were proof fired with cartridges developing 17,500 pounds mean pressure. In

one of the old black-powder Single Action Colts I fired several hundred extreme loads of dense and bulk smokeless powder without developing any indication of weakness in the arm. The way this .45 Colt was finally blown up was by seating a heavy bullet deep in the case on top of a maximum load of an obsolete pistol powder. When tested in the laboratory these loads developed twice the pressures a modern handgun is supposed to withstand. Revolver coppers indicated 25,000 pounds pressure, but rifle coppers showed a mean pressure above 30,000 pounds.

In *Outer's Book* for March, 1915, one J. W. Molloy reported on his experiences with heavy smokeless charges in a remodeled "Smith & Wesson .44-40 Schofield Model." One group of 50 shots was made with 18 grains No. 80 powder behind a 225-grain bullet. Another load, using the 205-grain Anderton bullet with the same powder charge, was reported as giving "very little recoil." The bullet was sized to .424" diameter. The test was repeated by firing 50 shots, using a new lot of the No. 80 powder. The large photo accompanying the article showed a gun that resembled the S. & W. Frontier No. 3 (.44 W. C. F.) revolver made in 1885.

W. A. Wright recessed the chambers of his .45 S. & W. Schofield to take the rim of the modern .45 Auto Rim cartridge. I could not believe anyone would use jacketed bullets in the relatively soft bore of a black-powder barrel, and assumed he used the .45 Auto Rim lead bullet cartridge as made by the Peters Cartridge Company and others.

This Peters .45 Auto Rim with lead bullet has ballistics very similar to the old .45 Colt smokeless and to the .45 Colt ammunition regularly used in both the .45 S. & W. Schofield and the .45 Colt Single Action Army of black-powder vintage. It is one of my favorite loads in the S. & W. .45 U. S. Army revolver and the 1917 Model revolver. The ballistics of the Peters 255-grain lead bullet are: 740 f.-s. muzzle velocity and 310 ft.-lbs. muzzle energy. The Peters Cartridge Company says of this bullet in their .45 Auto Rim cartridge: "—and will micrometer from .452 to .4525 inch when it is withdrawn. Its temper can best be described by giving the composition of the bullet which is 97.5% lead and 2.5% antimony. The average breech pressure developed is approximately 13,000 pounds."

Mr. Wright's .45 S. & W. Schofield has a 7" barrel and 1 1/16" chamber length. The walls between the chambers are 3/32 inch, or .0937 inch, thick, considerably thicker than those of the .45 Colt Single Action Army. Mr. Wright uses lead bullets only in this revolver. He

uses the Remington .45 Auto Rim lead bullet cartridge. Remington loads this cartridge the same as their .45 A. C. P. jacketed-bullet cartridge. The standard diameter of .45 A. C. P. caliber bullets is .451 inch and the pressure is 13,000 pounds. The Remington ballistics are: 230-grain bullet, 810 f.-s. muzzle velocity and 340 ft.-lbs. muzzle energy. Mr. Wright's letter says, in part:

"I have fired something like 500 Auto Rim lead bullet factory cartridges, Remington make. About the same number of hand loads, 256-grain (Ideal) bullets. Temper 1 to 20, 4 grains Bullseye. And probably about 250 of the 180-grain handloads. The 'old gun' is standing up nicely, showing no signs of wear, no signs of getting shaky, no signs of weakening at all. Hinge joint as tight as ever."

The 180-grain bullet was made by shortening the Ideal 255-grain .45 Colt bullet and was used with as much as 4.5 grains Bullseye powder. The recoil is reported as mild with the 4.0 grains load behind the 180-grain bullet and as heavy behind the heavier bullet.

Factors which would tend to increase pressures above normal when using the .45 Auto Rim lead bullet are the wider lands and smaller bore (.437 to .444 inch) of the .45 S. & W. Schofield barrel. Factors which would tend to counteract this are the deeper grooves (the discrepancy in groove diameters is only .002, or .449 to .451 inch) and the slower twist (1 in 24 inches against 1 in 16 inches) for the .45 S. & W. Schofield. The bullets used, considering temper and powder load, are unlikely to upset excessively in the chamber opening and, being conical pointed in shape of nose, they should not exert undue swedging effect on the barrel upon entrance at the breech as would be the case were an oversize wad-cutter bullet used. The .45 Auto Rim cases are also probably stronger than the old .45 S. & W. cases for which the gun was intended.

The influence on pressures developed in normal .45-caliber revolvers of increasing the diameter of lead bullets of proper temper has been tested, using a charge of 5 grains Pistol Powder No. 5. A bullet diameter as large as .455 inch gave 729 f.-s. and a mean pressure of 10,526 pounds, while a .458 inch diameter gave an increase of 41 f.-s. and of 340 pounds pressure.

I once tried a still larger bullet in an old black-powder .45 Colt Single Action that had been abused or worn shaky. The bullet normally weighed 262 grains when cast 1 to 10, but it was made heavier of Fray metal and was seated dry on top of 15.5 grains No. 80 powder in the .45 Colt case. Bullets which weigh 200 grains to 250 grains when made 1 to 10 temper weigh 10 grains more when made of Fray metal, so this bullet weighed considerably

more than 262 grains. It was more than .005 inch larger than the groove diameter of the barrel. Ten shots were fired without appreciable effect on the gun outside of starting a few screws in the frame and stock. I have no idea what the probable pressures were, but considered this firing ample as a proof test of the old black-powder Colt.

It is interesting and gratifying to note the remarkable strength of certain old guns designed and made for black-powder loads. This strength legitimately should be considered only as a very desirable margin of safety to safeguard the shooter and others in his vicinity when something causes an individual cartridge to develop abnormally high pressures. It can be so utilized only by adhering to standard loads. Experienced experimenters consider each safety factor against every potential pressure influence when they venture into the "unknown." The layman who is likely to overlook some seemingly insignificant but highly important thing may not always safely follow the leader and he had better stick to the "straight and narrow" until he is sure he is right.

Model 34 Remington and Model 55 Lyman

THE shooting game has benefited from the current economical condition through the development of improved shooting equipment designed to sell at prices which shooters can pay. For Junior rifle training, completely equipped bolt action, single-shot rifles are being made to sell at prices ranging from \$10.50 to \$15, according to the manufacturing and marketing facilities and ingenuity of the different makers. Rifle stocks and rifle sights have been improved, and cost has been kept down.

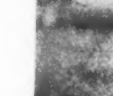
A new series of Lyman receiver sights has recently been designed for the bolt action type of Junior training rifles mentioned above, and these new Model 55 sights are better than the old Model 42 sight, because they are nearer the sighting eye, and they are considerably cheaper. They are mounted on the extreme rear end of the receivers of these rifles, on the left side, which rearmost location lengthens the sighting radius and also increases the optical efficiency of the aperture.

I hope that arms makers will soon recognize the importance (to the future of rifle shooting and to their own) of fitting boys' target rifles with properly designed sights and with sling swivels. On any small-bore rifle having any pretense to accuracy there is not the slightest justification for open sights and no excuse for cutting a rear sight slot in the barrel. Because the

(Continued on page 34)

**amp Perry
imbledon.**

Score
.1079
.1073
.1071
.1071
.1071
.1071
.1069
.1067
.1065
.1065



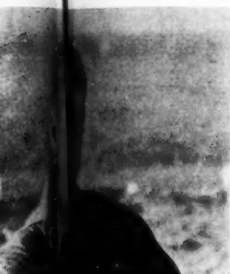
United States Marine Corps

32

PALMA MATCH

EAT PERRY

ot, Kleanore and Palma Match made a clean sweep of the Fifth Corps Area
 otember
 matches, ending the 20-man team matches, 81 shot either Kleanore or Palma
 In 8 of matches Remington earned first place and in most of them Rem-
 stand of accuracy and dependability the shoot demonstrated clearly that



D WILES were Grand Aggregate with a score of 1000 in Palma Match.

RANGE TEAM MATCH, ES

20 shots at 200 yards

s shot Palma

Team	200 yards	Total
Thurman Randle	197	396
A. Wilkens	194	390-786

RANGE TEAM MATCH, ES

20 shots at 50 yards and

s. Metallic

atch. Mr. Summerall shot

Team	100 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

Team	200 yards	Total
Thurman Randle	198	396
A. Wilkens	199	399-795

CAMP PERRY INDIVIDUAL, 54 ENTRIES

Course: 10 shots at 50—100 and 200 yards.

First 7 and 8 out of first 10 shot Palma Match or Kleanore.

Place	Name	Residence	Score
1.	H. H. Jacobs	Dayton, Ohio	298
2.	M. L. Israelson	Corry, Penna.	297
3.	F. J. Paffe	St. Augustine, Fla.	296
4.	Bradford Wiles	Chicago, Illinois	296
5.	W. J. Summerall	Waycross, Georgia	296
6.	Milton Miller	Columbus, Ohio	295
7.	Thurman Randle	Dallas, Texas	295
8.	Chas. T. Paugh	Wayne, Michigan	295
9.	Wm. P. Schweitzer	Hillside, New Jersey	295
10.	R. E. Loudon	Butler, Penna.	295

SMALL BORE WIMBLEDON MATCH

Course: 20 shots at 200 yards.

7 out of first 10 shot Palma Match.

Place	Name	Score
1.	L. A. Wilkens	195
2.	Russell Wiles	195
3.	R. A. Swigart	194
4.	Elmer E. Davis	194
5.	C. S. Mundy	193
6.	Wm. P. Schweitzer	193
7.	Wm. T. Bryan	193
8.	Roy A. Loder	193
9.	R. C. Pope	193
10.	Russell Wiles, Jr.	192

INDIVIDUAL SHORT RANGE ANY SIGHT MATCH, 57 ENTRIES

Course: 20 shots at 50 yards and 20 shots at 100 yards. Any sights.

First 2 and 6 out of first 10 shot Kleanore or Palma Match.

Place	Name	Residence	50 yards	100 yards	Total
1.	C. S. Mundy	Toledo, Ohio	199	199	398
2.	Roy A. Loder	Erie, Penna.	198	199	397
3.	Wm. P. Schweitzer	Hillside, New Jersey	199	198	397
4.	Edson Klinkel	Butler, Indiana	199	198	397
5.	F. J. Paffe	St. Augustine, Fla.	199	198	397
6.	L. A. Wilkens	Norwood, Ohio	200	197	397
7.	Chas. G. Hamby	Atlanta, Georgia	200	197	397
8.	E. L. Lord	Chicago, Illinois	199	197	396
9.	R. E. Loudon	Butler, Penna.	199	197	396
10.	E. N. Littleton	Bowling Green, Ohio	200	196	396

RAILWAY INTERNATIONAL SMALL BORE TEAM MATCH

Conditions: Same as in International Small Bore (Dewar).

First 6 and 15 out of 20 men on team shot Kleanore or Palma Match.

Team Members	Residence	50 yards	100 yards	Total
Gail Evans	Steuenville, Ohio	100	100	98 99 397
F. J. Paffe	St. Augustine, Fla.	100	99	99 98 396
J. F. Kling	La Crosse, Wisconsin	100	99	98 98 395
Harold Collett	Irwin, Penna.	99	97	99 98 393
R. D. Maxwell	Columbus, Ohio	98	100	98 97 393
A. N. Dow	Jacksonville, Fla.	99	98	99 96 392
F. D. Tice	Bellefontaine, Ohio	98	98	97 98 391
Vick Reed	Bellefontaine, Ohio	96	98	99 95 388
L. W. Montgomery	Avinger, Texas	97	97	93 100 387
E. M. Farria	Portsmouth, Ohio	99	97	96 95 387
J. W. Aitken	Overly, North Dakota	99	96	96 95 386
O. F. Seth	Portsmouth, Ohio	95	95	99 96 385
Jack Frost	Toledo, Ohio	97	97	96 95 383
J. F. Woleslagle	Larimer, Penna.	97	98	93 96 384
H. G. Olson	Harrisburg, Penna.	99	92	94 99 384
R. M. Morton	Churdan, Iowa	96	94	97 96 383
Edward Lawton	New Kensington, Penna.	95	98	95 94 382
W. E. Kelly	Ellett, Ohio	96	94	96 94 380
G. J. Mundy	Toledo, Ohio	96	95	94 94 379
T. J. Toler	Fort Worth, Texas	94	95	92 93 374

Team Captain: F. J. Paffe.

Team Coach: Thurman Randle.



VIRGIL RICHARD won the Individual Short Range Match with a remarkable possible—400—shooting Palma Match and a Remington Martini Rifle.

AMERICAN INTERNATIONAL SMALL BORE TEAM (FIDAC)

Course: 20 shots per man at 50 meters fired on four targets.

First place and 5 members of team shot Kleanore or Palma Match.



GAIL EVANS, high man on the Railway International Small Bore Team—397—with Palma Match.

50-YARD UNLIMITED RE-ENTRY MATCH, 286 ENTRIES

First 7 and 8 out of first 10 shot Palma Match.

100-YARD UNLIMITED RE-ENTRY MATCH

First 4 shot Kleanore or Palma Match.

200-YARD UNLIMITED RE-ENTRY MATCH

First 3 shot Kleanore or Palma Match.



C. S. MUNDY, winner of the Individual Short Range Any Sight—398—with Kleanore.

PALMA MATCH TO WIN

34 REMINGTON AND 55 LYMAN

(Continued from page 31)

Model 34 Remington came fitted with open sights I delayed trying it until the Lyman Model 55 receiver sight was ready. The two belong together and this sight should be ordered with the rifle.

The Model 34 Remington is perhaps the best plinking rifle available for the money, especially to those who like a bolt action. It costs less than \$15. It is a bolt action repeating rifle with tubular magazine and a good one-piece stock. It has appreciable weight (5¼ lbs.) for steady holding and a speed lock (3/16" striker travel) with only a fair trigger pull to go with it. The carrier (from magazine to chamber) is designed to feed the .22 Long Rifle cartridge in a straight line. The gun will also handle .22 Short cartridges, and this cheaper ammunition might as well be used exclusively, because the factory sights limit the range to that of the .22 Short cartridge, or about 40 yards.

It is almost a match rifle, easy to single load, but it falls short in several particulars. As issued it is not even a target training rifle because it lacks a square-top, flat-face front sight, a peep rear sight and sling swivels. The Remington front sight is useful only for short-range plinking and is not very good for that. Outside of the sights the most obviously cheap parts are the trigger guard and the buttplate. Next in order is the flat rocker type safety on the right side which blocks the trigger. The work on the action appears crude and the final opening motion of the bolt handle is very hard. The barrel is pinned to the receiver with two pins at the bottom.

Now, having told the worst features, I would say that in all other respects this Model 34 rifle approaches perfection. The action is cleverly designed and very reliable. The bolt is strong and smooth in operation, once unlocked. It is designed for high-speed ammunition. The straight-line feed, the quick, light striker, the fit of the stock and the ample muzzle weight of this rifle make one wish Remington had completed the job regardless of necessary increase in selling price.

The Model 34 Remington has other noteworthy features. The bolt and handle are chromium plated and the bolt has two locking lugs. The gun cannot be fired until the action is locked. The end of the striker has no knob and cannot be cocked or let down with the fingers. A very obvious red band flags a warning when the striker is cocked and ready to fire. The magazine holds three times as many Long Rifle cartridges as other bolt action repeaters, and as a plinking rifle it will allow 22 shots with .22 Shorts at one loading.

The balance point is at the takedown screw, which is pretty well forward, being more than 6 inches in front of the trigger.

The stock length is about 13½ inches either way from the trigger, and the drop is 1¾ inches and 2¾ inches. The top of the grip and comb shoulder are about perfect, but the inside curve of the pistol grip should have a shorter radius at the bottom to bring it ½ inch nearer the trigger. The buttplate should be cross-grooved for plinking, and for target shooting it should also be made straighter and longer. For target shooting the forestock should be 3 inches longer to accommodate a sling swivel, or a sling swivel should be attached just in front of the present stock (around barrel and magazine tube). For both plinking and target work the unlocking of the bolt should be made easier if not smoother. The Model 34 has the same stock, barrel, guard, buttplate and takedown as the Model 33 Remington. It is the N. R. A. Junior 33 plus magazine, repeating action and minus the target sights and sling and selected barrel.

The only change we made was to fit the Lyman Model 55 receiver sight. This sight is adjustable in both planes by the trial and error method. While no micrometer adjustments are provided, it makes a fine sight for accurate aim. On this rifle the aperture was about an inch from the eye in prone shooting. In spite of the large globular factory bead we obtained fairly good groups at 50 yards. The average 10-shot group for two shooters, firing 100 rounds of four makes and five types of ammunition, was 1.836 inches. For one shooter with the same ammunition the average was 1.708 inches. This barrel seemed to prefer Remington ammunition. Using four different loads of Remington brand, the 40 shots gave an average 10-shot group diameter of 1½ inches from prone rest at 50 yards.

Noske Field Scopes

A NUMBER of years ago I used a 3X Noske Field scope on a Winchester Model 1886 rifle. This was a top-ejection rifle and the mount was offset to hold the scope ¾ inch to the left of the bore. To avoid cross-firing it had to be so zeroed as to leave the scope axis and bore axis parallel. The elevation adjustment was in the scope and the lateral adjustment was in the mount. I experienced considerable difficulty in getting it zeroed at 100 yards, two afternoons being devoted to that job. Both mount and scope have been improved since that time.

The most unique feature of the new Noske scope is the 6" eye relief. Properly mounted the Noske eye lens is placed forward of the bolt handle, the safety and the receiver sight. For this reason the Noske scope is exceptionally well adapted for such bolt-action arms as the Spring-

field, Mauser and Winchester. When the receiver sight is zeroed for 200 yards the line of sight through the Noske scope is ⅞ inch higher. When the slide or aperture arm of the receiver sight is removed and carried as an auxiliary sight, the Noske scope can be mounted about ¼ inch lower. Because its low position allows normal contact of the face against the stock the Noske scope is probably the quickest and most accurate hunting sight obtainable for unaltered Mauser, Winchester and Springfield bolt-action rifles.

The new Noske scopes are made in 2½X and 4X and there is also an eyepiece available for converting the new 2½X scope to 4X. The actual magnification appears to be no more than 1.75X and 3.5X, respectively. The 2½X scope is 8½ inches long and the length of the 4X is 9¾ inches. To suit individual eye position the 2½X scope can be moved back and forth in the Noske mount a total distance of ⅞ inch, while the 4X scope can be similarly shifted ¼ inch. The tube is ⅞ inch thick and the ocular end is enlarged to 1½ inches. The Noske sight complete is not heavy or overly bulky. Scope, mount and base would add a pound of weight to the rifle. The scope alone weighed 9 ounces.

The light and definition are good. The field of view at 100 yards appears to be 17.5 feet wide in the 4X scope and twice as wide in the 2½X scope. The aiming post covers 10 inches per 100 yards in the 4X scope and it is twice as wide in the 2½X scope. The upper part of the post is tapered and the flat top covers between 3 and 4 inches in both models. This is a good reticle for quick work or in poor light and for running game, as in Eastern deer hunting. Many shooters will find these posts too large for small game or for long-range work. Cross-hairs or a single cross-wire are not practical for the Noske reticle which is adjustable laterally and vertically.

The aiming post is moved in both planes by means of micrometer screws mounted on the tube. The edges of these screws are serrated, there being 40 teeth on each. Each tooth moves the group 1 inch at 100 yards and the notches between the teeth can be used for ½" changes in adjustment. There seems to be a total of 70 minutes elevation provided and nearly as much windage latitude. These are the most convenient and reliable internal scope sight adjustments I have tried. Threaded metal caps lock the adjustments and protect the screws from dust, dampness and meddling. These excellent adjustments adapt the Noske scope for interchangeable use on two rifles.

Focus for individual vision is accomplished by turning the eyepiece and locking it with the collar. Parallax is re-

moved by adjusting the objective cell and locking it tightly. Both adjustments are convenient and positive. The 4X scope is best adapted for varmint work or Western hunting, while the 2½X is best for quick sighting at short range because of its greater breadth of field.

The Noske mount base is a steel plate only 2 inches long, which is fastened to the left side of the receiver with pins and screws. The split top of this base is shaped into the form of a male dovetail and the female member of the mount slides over it. The two parts are locked together by a special capstan screw which spreads the male dovetail until it fits the female dovetail very tightly.

The single locking screw in the center of the short base constitutes the weak point of the Noske mount. The mount may be removed and replaced without change in zero, but a longer base and two locking screws would make the outfit less vulnerable to the prying strain which must result when continued pressure or a severe bump is applied against the end of the scope. Strong brackets clamped to the tube hold the scope over the center of the bore. The mount proper is in one piece and a single screw in each split clamp ring is relied upon to hold the scope from sliding or rotating.

When the Noske scope is mounted in the lowest position the front sight and muzzle of the barrel may be seen in the field of view. This is only mildly annoying because the image is indistinct and remains below the top of the aiming post. One annoying feature of the long eye relief, when shooting toward the light, is the reflection of the shooter's face on the ocular lens. When the light is dim or the face is shaded this does not occur. Because the eye must be pretty accurately aligned with the center of the Noske scope it is important to have a well fitted stock and to place the scope at the exact distance which suits the eye position of the shooter.

A Left-Hand Bolt Handle

THE story is that a 58-year-old shooter scored 316 x 350 over the 600-yard qualification course from the left shoulder by using an auxiliary handle on the Springfield bolt lever in the rapid-fire stages. The device is patented and sold by H. E. Wales of Bremerton, Washington.

This auxiliary handle is a piece of Man-ganese bronze about 7½ inches long with a socket at one end to fit the bolt lever over the knob. It is held tightly clamped to the bolt lever by three screws. The free end is bent over the receiver and ends in a neat knob sticking straight out to the left about 2 inches from the gun when the

action is closed. The bent clears the receiver sufficiently to permit view of the sights beneath it.

When the rifle is fired from the left shoulder, the left hand readily grasps the projecting knob and pulls it down to raise the bolt lever and open the action. It is then drawn back like any regular bolt and pushed forward to feed the next cartridge into the chamber. In this position the knob is about an inch from the left side of the stock. Without releasing the grasp the knob is now raised to its original position to close the bolt lever and lock the action.

The device works smoothly and positively. After the technique has been learned it operates the action with all the celerity of the regular bolt lever. It is polished and in natural bronze color. The time required for drawing up three screws with a screwdriver represents the time required for attachment. The sample was designed for the Springfield Service rifle, but it works on my Krag fitted with the Pacific K-2 receiver sight. It is offered in two models, one for straight bolt levers and the other for curved bolt levers.

On some rifles this auxiliary handle will interfere with the sights. I have in mind scope sights which project to the rear of the bolt lever as most of them do, and sleeve sights or receiver sights which are mounted behind the bolt lever, like the Lyman 48-Y on the Savage N. R. A. Model. Under some of these conditions the Wales auxiliary bolt handle can be adapted by altering its shape. The metal of which it is made permits bending without danger of breakage.

This device will be a boon to southpaw club members who find it difficult to shoot from the right shoulder. The device is legitimate for club matches and qualifications, but no attachments of any kind are allowed in matches intended for the Service rifle "as issued."

Detachable Shooting Pads

THE Northwestern Tanneries Specialties Company of Portland, Oregon, has developed a most excellent idea to the extent of placing on the market a padded shooting mitt and a complete set of detachable shooting pads which may be fastened to the shooter's coat, blouse or shirt exactly where he wants them and needs them.

These pads are of thick but pliable sheepskin. They are well made, being neatly sewed on heavy khaki cloth, which matches the regular shooting coat made by the same company. The two arm pads are in the form of sleeves which may be drawn up over any garment and securely fastened exactly where they will give the maximum comfort and service. These pads are so

generous in proportions that they should serve any shooter even when permanently fastened in an arbitrary position. The design goes further, however, by allowing the exact position desired by the shooter.

The sleeve for the left arm has a full-length pad 16 inches long by 9 inches wide, and the right elbow pad is 13 inches long and 7 inches wide. The heart-shaped shoulder pad is 9 x 8 inches. A series of holes arranged in pairs around the edges of the pads take the khaki-colored laces by which the pads are attached to the shooting coat or other garment. First determining the exact place for the pad by trial, the correct position is marked with a pencil through the metal eyelets. The garment is then pierced through each of these marks and the pad is tied to the garment with the laces. This arrangement also permits transferring the pads to a lighter or heavier garment as the season demands, or of removing them for safe storage during off seasons.

The left elbow pad is designed to also protect the arm from a tight sling and the shoulder pad is large enough to protect the upper right arm. The shooting mitt is padded to protect the back of the hand and wrist from the sling. Lighter padding protects the web of the hand and the palm. It is made of light, soft leather and with the finger tips and thumb free it is very comfortable and convenient. The index finger is separated from the others, which serves to keep the mitt from flapping around on the hand.

A Simple Sight Mike

WILL CARROLL, 406 East 66th Street, Los Angeles, Calif., advertises a micrometer, for adjusting the Model 1905 Service rear sight on the Springfield, at \$1.50. It also works on the Model 1901 sight used on many Krags. This is an all-steel mike about 3 inches long with a notch to fit over the drift slide on the lower end and a notch for the top bar of the leaf sight near the other end. At the top is a sleeve graduated in half minutes of angle to a total of 5 minutes. The upper half of this sleeve is knurled. This mike has a maximum diameter of 5/16 inches and it fits into the slot of the leaf sight.

The graduated sleeve is threaded on the shank of the mike and a coil spring is used between the shank and sleeve to take up lost motion. There is no scale provided, but the yard scale on the sight itself is used in reading the adjustment. The drift slide is first adjusted by the yard scale and then the adjustment is refined by using the mike. All mike readings are noted in reference to the yard reading next above for any range, as "300 yards minus 5½ minutes," etc. Since this mike can only

push the drift slide, it must be shoved slightly beyond the approximate adjustment desired before the mike is brought into play.

This mike is designed to be left on the sight when firing, but this is unnecessary and inadvisable as it is not securely held and may be jarred loose. Furthermore, rules will not permit leaving it attached in matches for the Service rifle "as issued." Essentially this is a two-hand mike because the drift slide must be held in solid contact with the notch of the mike while the sleeve is being turned by the other hand. With two hands this mike is fairly easy to use and the yard and minutes system of reading is not difficult, once a firing table covering each range is logged in the score book. The total movement provided is more than ample for the longest target range.

Wright's Lenseless Bows

W. A. WRIGHT, maker of the Eye-sight Compensator, now provides a pair of "Lenseless Bows" with his orthoptic gadget for those who do not ordinarily wear spectacles or shooting glasses. These are light spectacle frames with a horizontal cross-wire replacing the glass of each holder. The compensator is held by a spring clip to the rim and the aperture disc rests against the cross-wire.

This arrangement allows any position of the orthoptic aperture required by any shooting stance. The wire does not interfere with vision, being slightly above center and too near the eye to be seen. The advantage of these "Lenseless Bows" is their light weight, coolness and freedom from perspiration in hot weather. The disadvantage is that a negligible protection is afforded the eyes from powder sparks and gases when a primer or case head leaks.

A Revolver Loading Magazine

C HARLES MOLLO, 3018 Wharton Street, Philadelphia, Pa., called at the office and demonstrated a device which will probably interest peace officers and guards who are likely to get into gun fights. The time required to load a revolver by the usual method is of no consequence on the target range. However, it may be of most serious importance in the midst of a gun fight. Mr. Mollo showed me how to load all six chambers of a revolver cylinder in the time required for loading a single chamber by the regular method.

The Mollo loading magazine is made for 6-shot .38-caliber revolvers having swing-out cylinders. The six cartridges are held in spring clips on a strap of leather, properly spaced to coincide with the six chambers when the strap is rolled and locked. A sliding spring catch and lock at the end

of the strap projects when it is rolled into the form of cylinder, and this projection serves the dual purpose of a handle and of a retainer in the belt sheath.

In use, this leather magazine is carried suspended in a leather sheath from the belt and retained by a snap, which is secure but readily released with one pull. The leather magazine is withdrawn with one hand and the protruding bullets are started in the revolver chambers with a single thrust. With fingers still gripping the metal end of the strap the hand is now drawn smartly away, which releases the catch and pulls away the strap, allowing the six cartridges to drop into their respective chambers. The time required is that of loading one chamber with a cartridge from the belt. The estimated average time is 3 seconds, and the technique may be learned, practiced and mastered in 30 minutes or less time. The Mollo method is twice as fast as loading the Model 1917 revolver with the two military clips.

Questions and Answers

CONCERNING HUNTING SCOPES AND MOUNTS

I WISH to thank you for your kind answer to my questions regarding hunting telescope sights. There are a few further matters I should like cleared up. I note that you recommend either the Zeiss or Hensoldt Zielklein scopes on Niedner or Griffin & Howe double-lever mounts. In studying the literature of Zeiss and Hensoldt, I find that the Zeiss Zielklein of 2¼-power has a field of 115 yards per thousand, while the Hensoldt Zielklein of 2¾-power has a field of only 80 yards per thousand. The reduction in field of the latter is greater in proportion than the increase in power. I have used a Winchester target scope extensively, and fully realize the importance of a wide field of view in a hunting scope. I notice further that the Hensoldt Zielyt scope has a field of 135 yards per thousand. This seems remarkably good, and I'm wondering if there is some other feature of this scope which makes it less desirable on the Springfield.

I have a very good Springfield, excellent stock, with which I can consistently make 3- and 4-inch 10-shot groups at 200 yards, using the Lyman sights, and I'm interested in obtaining the best sighting equipment available.

The outfit will be used practically entirely for hunting, but some of the work will be on coyotes at long range, and on ground squirrels, which present a very small target. The glass and reticle chosen should, therefore, be capable of accurate long-range work.

My present inclination is toward the Zeiss Zielklein or Hensoldt Zielyt, largely because of the wide fields of view obtained. I believe I should choose the No. 6 flat-top post reticle or the Hensoldt No. 5 with blunted picket.

Which of the three scopes named has the most brilliant illumination?

From studying the literature I slightly favor the Niedner mounting, principally because of the locking screws rather than levers, and because of the adequate looking windage adjustment.

It has not been possible for me to see and examine any of this equipment, consequently I should like your candid opinion on the very best combination.

I notice in Niedner's literature that he attaches the mount with screws, pins, and solder. Will any damage be done to the receiver by heating it to soldering temperature?

Is any advantage to be gained by using the low mount and having the bolt handle altered? I have a high comb stock with relatively small drop at the heel. Will the bolt be damaged in the altering process because of the temperatures necessary?—E.C.S.

Answer: The field of view of the Hensoldt Zielklein glass is smaller than that of the Zeiss Zielklein, but is large enough for all practical purposes. I have no difficulty in keeping running game in the field of this scope. I usually recommend these two scopes exclusively for hunting because of their large latitude in eye relief, which is a very great advantage in hunting, far exceeding the other seeming advantages in other glasses. Thus, practically the entire field of view will be seen through these telescopes whether the eye be 2 inches or 5 inches in rear of the eyepiece. With all other telescopes, including the Hensoldt Zielyt, the eye must be between 2½ and 3½ inches in rear of the eyepiece to obtain the full field of view, and if the eye is as close as 2 inches or as far away as 4 inches, the field is most decidedly narrow and unsatisfactory. In hunting over uneven ground, shooting sometimes up and again downhill, one cannot assume the standard firing positions, and cannot assure his eye being at a certain position without assuming a cramped and unsteady position.

The selection of a telescope is bound to be a compromise anyhow. For example, one will often pick up coyotes and ground squirrels in the grass with his binoculars, see them clearly, and then be utterly unable to see or aim at them with a 2¼ or 2¾-power telescope. There is not enough resolving power. A 4-power glass would be better for such work, but it is big, heavy, and expensive. The 2¼ and 2¾-power scopes will, however, usually prove adequate for coyotes and ground squirrels, and will always prove so for large game at any practical range.

I have never been able to find any difference in the illumination of any of these telescopes up to 4-power so far as the eye can discern. I think you will find the Niedner mounting entirely reliable. Do not imagine, however, that you will be able to adjust the windage feature positively and accurately, as it cannot be done. What happens, say you are shooting at 100 yards, is something like this. You are shooting, we will say, 2 inches to the left. So you move the wind gauge 2 graduations or minutes to the right. You now find that you are shooting 2¼ inches to the right. So you move the wind gauge back 1 minute and shoot again. You are still shooting 2¼ inches to the right. After about 1 to 2 hours of trial and error, you get it adjusted just right, that is, just right for that day. But the rifle varies from day to day in where it shoots at 100 yards, by 2 to 3 inches. After half a dozen visits to the target range, you will finally arrive at an average adjustment. Some days, the rifle will shoot just exactly right with this adjustment, and other days, it will shoot 1 inch or a little more right or left. The same exactly pertains to the elevation adjustment, and the same pertains with all good styles of mounts. You will find no mounting any better in this respect than the

Niedner mounting. The thing to do is to arrive at this average adjustment by five or six days of practice on the range, and then leave the mount clamped in this adjustment permanently and don't change it unless absolutely necessary. The Niedner mount, once adjusted, will stay in adjustment almost indefinitely.

With a .30-'06 rifle, using a cartridge of 2,700 f. s., it has been my practice to adjust for the average setting which will hit the exact point of aim at 200 yards. Rifle then shoots 2¾ inches high at 100 yards and 9 and 22 inches low at 300 and 400 yards. Make no allowance for distance when arriving at ranges you estimate to be not over 225 yards. Beyond that, aim a little high. For very long shots (350 to 400 yards), aim even with the top of a big-game animal above the heart region. Like you, my choice is the Zeiss No. 6 flat-top post reticule or the Hensoldt blunted picket.

The Niedner and Griffin & Howe method (identical) of attaching the base of the mount does no harm whatever to the receiver.

I am not in favor of bending down of the bolt handle despite the fact that a low mounting of the telescope is an advantage in steady aiming. The ruining of the heat treatment at the rear of the bolt, to say the least, does not improve its strength any, and the change in surface hardness of the cocking cam makes the bolt lift very hard. Moreover, with a very low scope, you cannot use the regular safety lock, but must have a special safety made, and there you get into still more trouble.

RELOADING EQUIPMENT

I HAVE a Krag and some 220-grain, rustless cartridges (Peters) for it. I understand that a mercuric primer causes the shell to crystallize upon being fired, rendering it unfit for further use. Does the cartridge mentioned above have this primer. Do those Krag cartridges procured from the D. C. M. have them? How would I go about changing the primers? I have no reloading tools.

I have thought that if I got a piece of small glass tubing and put the powder in this, making a scratch mark where a certain weight of powder comes, just as on a graduated test tube, that it would save a lot of bother weighing each charge of powder. The tube would be of a small diameter, say ¼ or 5/16-inch inside. As the different makes of powder are of different sizes and weights I would probably have to have a separate tube for each. Would this method be all right?

A friend of mine had a 45-70 Springfield given to him. It was in pretty bad shape. He buffed the barrel up on the outside, cut it off to 26 inches, and cut the stock off to a sporting stock. After we got it all fixed up it looked much better than we had expected. The barrel on the inside seems to be in pretty bad shape. How can we clean it out?

We were told that it has a recoil like the kick of a mule. How does it compare to the Krag and Service Springfield?—T.K.

Answer: Complete general information on reloading is given in the "Ideal Handbook," and it will be very necessary for you to have a copy of this book. Send 50 cents to the Lyman Gun Sight Corporation, 90 West St., Middlefield, Conn., for a copy, and study it carefully before buying tools. I would also suggest that you write to the various reloading tool makers who advertise in THE AMERICAN RIFLEMAN before making a selection. All of them will load satisfactory ammunition.

You will find the straight-line tools slightly more accurate, and also more convenient to operate. The Ideal Handbook gives information on loads in the various calibers with both jacketed bullets and the Ideal line of lead alloy bullets.

The Krag commercial ammunition (which is that sold by the D. C. M.) has noncorrosive primers. These cartridges can be broken down with the Pacific or B. & M. Straightline reloading tools equipped with a bullet-puller head or attachment. These Straightline tools will not injure the components. Wear glasses or goggles when extracting live primers. The primers should be replaced by the F. A. No. 70 (D. C. M.) or the Remington No. 9½ primers, or the new W. R. A. Stayless primer No. 115½. All these are nonmercuric and easy on the brass cases. I would recommend that you start with new Krag cases instead. They can be had (decapped for mail shipment) from Belding & Mull, 830 Osceola Road, Philipsburg, Pa.

Your powder charger would not be accurate as there is no definite cut off as in dipping with a charge cup, or in using the B. & M. visible powder loader, which employs adjustable graduated charge tubes. Maximum loads should be weighed on the Fairbanks assay scale. Normal full loads (not maximum) can be thrown with Ideal, B. & M., or Bond measures. Midrange or reduced loads can be dipped with a charge cup. Use a heap of powder for uniform dipping and then scrape the top of the cup to leave it level full for each charge.

The pitted barrel would have to be polished for any improvement. Use mild abrasives like Winchester Rust Off or B. S. A. Mottly Paste. Pits are holes and cannot be removed.

The 45-70 does not have excessive recoil in my opinion. The energy of recoil developed is the same as that of the 220-grain load in the .30-'06, or greater than that of the Krag 220-grain load. It is slightly less than the recoil of the 180-grain 2,700 f.-s. load in the Springfield.

45-70 H. V. AT 2,000 F.-S.

IN THE last AMERICAN RIFLEMAN, in the Dope Bag under "The Need for a Combination Gun," you answer H. T. F. In this answer you intimate that with the 300-gr. H. V. cartridge in 45-70 caliber, the velocity would be slightly above 2,000 f.-s. Do you mean that all factory H. V. loads in this caliber are now loaded to this velocity as standard? Or will the 2,000 f.-s. be obtained by using extra long barrels with factory loads? Or did you have in mind special loads?

Answer: The standard velocity of the various makes of 45-70 high-velocity cartridges loaded with the 300-grain bullet is 1,850 to 1,890 f.-s. It would probably have been more accurate to have said "around 2,000 f.-s." However, I was talking about pressures of 40,000 pounds and the 300-grain M. C. bullet can be given very slightly over 2,000 f.-s. with HiVel and 17½ powder at 40,000 pounds pressure. The pressures developed by the standard high-velocity loads mentioned above run from 23,000 pounds to 31,000 pounds, and are not only safer (and more pleasant to use) in lever action rifles, but more accurate as well.

MILITARY .30 CALIBERS AND THE .30-30

FOR several days I have had an argument about the .30-30 caliber rifle, whether it was ever used by the U. S. Army or Navy.

I say it was not and that the present arm is the .30 caliber Model '03. Am I right? Or called the .30-'06? Was the Krag .30-40 caliber (Springfield 1898) used before this? If not what was? What was used before it?

Are not most of the rifles used in colleges for training the old Krag .30-40 bought from the Government? In a college near here they always call these rifles .30-30, and so give the impression it is used by the Army and Navy.

Please print something on this so all of these boys can be set straight on this matter.—R.W.S.

Answer: The .30-40 Krag was adopted in 1892, and first issued to our troops in 1894. The Model 1903 Springfield in .30-'03 caliber was first issued in 1904-5. This 1903 cartridge (rimless) used the large, long, blunt-nose Krag bullet and the neck was ¼ inch longer than that of the present .30-'06 case. In 1906 the 1903 Springfields were called back, the barrels were cut off at the breech and re-chambered for the .30-'06 caliber. This was loaded with a 150-grain pointed bullet instead of the former 220-grain round-nose bullet, and the bullet seat was changed accordingly. You will note that the 1903 cartridge had a very brief existence, all the Model 1903 rifles being chambered for the .30-'06 cartridge since 1906. The Krag rifles continued as militia arms until 1907, and were then gradually replaced by the regular Springfield service arm for National Guard use.

The .45-70-caliber single shot Springfield preceded the Krag. The Navy also used the 6-mm. Lee straight pull for a short period after the Krag was adopted by our troops.

The .30 W. C. F. or .30-30 has always been purely a sporting cartridge. .30-40 Krag is a larger shell and the .30-'06 still larger. It would be a ".30-50," comparatively.

.25 REMINGTON TO .250 SAVAGE CALIBER

WOULD you be kind enough to explain to me the exact difference between the .25 Remington and the .250-3,000 Savage rifles? Why is it possible to obtain such an increase in muzzle velocity in the .250 over that possible in the .25 Remington using the same size bullets? Is the case longer or bigger in diameter?

The .250-3,000 Savage seems to be a more powerful rifle than the .25 Remington, which makes me wonder if it would be possible to convert the .25 Remington into a .250-3,000 by changing the chamber to take the latter case and thus make the rifle more universal in use on various game animals, such as chucks and deer. Both rifles have a 22-inch barrel, and surely the bolt of the Remington seems strong enough for most anything in reason. The question seems to me to be whether the barrel would stand the load of the increased powder charge.

With bullets of a full .257" diameter what would you consider the very best chuck load, the 86-gr. S. P., or the 87-gr. O. P., and what would you advise in powder charges for both of the above to obtain the maximum velocity with safety. All cases to be hand loaded. Both to be used in the .25-caliber Model 30-S Remington of course. My barrel tested .257 inch by miking a lead bullet which was pushed through the barrel.—J.R.D.

Answer: The .250 Savage case is larger in capacity than that of the .25 Remington, because the body of its case is larger, being identical with the .30-'06 case at the head. The maximum load recommended behind the

87-grain Hi-Speed bullet in the .25 Remington is 33.5 grains weight No. 17½ powder, which develops nearly 2,800 f.-s. I have used this load behind the 86-grain .25-20-caliber bullet in my own Model 30-S Remington rifle, but normally used 32.0 grains weight No. 17½ powder behind this bullet.

In the .250 Savage case used in bolt action rifles the maximum recommended charge is 40.6 grains weight No. 17½ powder behind the 87-grain Hi-Speed bullet, giving 3,200 f.-s. I would cut this excessive charge to 39.0 grains weight, especially when using the 86-grain soft-point bullet. I prefer keeping under maximum charges because pressures are raised by many fairly insignificant influences, such as high temperatures, a different primer, a harder and larger bullet, or a slight increase in seating depth.

The Model 30-S Remington rifle in .25 Remington caliber is easily converted to .250 Savage caliber by altering the face of the bolt, setting the barrel back one turn and re-chambering. R. F. Sedgley, Inc., 2311 North 16th Street, Philadelphia, Pa., performs that job at reasonable cost.

WANTS A HARPOON GUN

NOW that the fishing along our Atlantic seaboard has become "bigger and better" than ever before, innumerable new devices have been brought into play by various sportsmen for the capture of the larger varieties. Among other things that I have seen is a shoulder harpoon gun unmistakably fashioned from an old .45-70 Springfield.

I was unable to examine the gun very closely, but apparently the barrel had been cut to about 20 inches and the rifling removed. The harpoon was fixed to a dowel, to the other end of which were fixed several felt wads. A blank black-powder cartridge was used for the propellant. When in flight, the dowel left the harpoon head and I suppose the line trailing behind kept the head from somersaulting.

Have you by chance any data you could give me on the construction of such a gun? If you have, I should like very much to try to build one.—F.W.H.

Answer: I have no data on the design and construction of harpoon guns. I will publish your letter in the hope that one of our readers will supply the dope.

ALWAYS GIVE DETAILED DESCRIPTION

I RECENTLY found a rifle of which I know nothing. It appears to be a German military rifle. The complete inscription on the barrel is as follows: Waffenfabrik, Bern, 169865, M: 78.

I would certainly appreciate any information that you might be able to give me as to the history, caliber, etc., of this rifle, and also if cartridges for the same can be procured in this country.—M.B.

Answer: Your rifle is the Swiss Vetterli magazine rifle, 10.4 mm. or .40 caliber. It uses the .41 Swiss Rim Fire cartridge as loaded by Remington, Peters, etc., with lead bullet and also with shot in a paper or wooden container in place of the bullet. These rifles are common, retailing for \$5 through such firms as Francis Bannerman Sons, 501 Broadway, New York, N. Y.

The gun was used in the Swiss Army from 1869 to 1881. Yours apparently is of the 1878 manufacture or issue. I am basing my

identification on the inscription "Waffenfabrik, Bern, 169865, M: 78" as this is the only clue you give in your meager description. If I am right, the gun has a loading gate on the side and holds 12 cartridges. The loading gate magazine cage and extractor are the same as in the Winchester lever action rifles.

The original ballistics are: .419" x 313-grain bullet with 61.7 grains powder and 1,338 f.-s.; maximum range 3,062 yards.

HIVEL AND 80-GRAIN BULLETS IN KRAGS

I HAVE some information that perhaps might help some Krag shooters if you think it is worth publishing. I asked the Hercules Powder Company for a load with the 80-grain .32-20-caliber Peters Express bullet that would have low pressure and high velocity to break up at slight impact. They referred my letter to their experimental station and this is the dope:

Charges as low as 25 grains of HiVel powder, giving 1,800 f.-s. muzzle velocity with only 5,400 pounds pressure, are uniform and satisfactory. A maximum charge of 43 grains of HiVel gives 3,020 f.-s. with 34,200 pounds pressure. It is feasible to use intermediate charges between these two limits for any velocity desired. These tests were made with a 30-inch barrel.

The pressure is very low and safe, as a Krag will stand much higher pressures; but 3,020 f.-s. is all this bullet will stand.—W.T.T.

IMPROVING OLD SERVICE AMMUNITION

PLEASE advise me concerning a nonfouling bullet to replace cupronickel bullets in some 1918 Service ammunition.

I have some 700 rounds of this stuff. The brass is good (no misfires) and it will stay in 4 inch at 100 yards; but some 20 rounds badly fouls my nickel-steel barrel. I have used the standard ammonia solution but find that it darkens or takes the polish off my bore.

What I would appreciate is an opinion from you as to a change of bullets in this stuff to make it suitable for offhand practice—running targets, etc., and to keep cost as low as possible.—R.L.B.

Answer: You could substitute the Western Lubaloy .30-30-caliber 150-grain open-point bullet in your .30-06 wartime cartridges without changing the powder charge. At normal ranges or to 200 yards ballistics would be identical. These bullets cost \$1.08 per 100, and are slightly subcaliber, or .307 to .3075 inch. The Peters Protected Point or Remington (150-grain) Bronze Point .30-06 caliber bullet would be better but costs \$2.70 per 100. Either is a full .308-inch diameter copper-jacketed bullet and ballistics would be the same up to 600 yards.

I would suggest that you get a B. & M. Straightline bullet puller, bullet seater and

powder loader. If you get the B. & M. reloading tool with puller head, you can also reload the fired cases with the 150-grain cupro-nickel bullets and a charge of 18 grains weight No. 80 powder or 20.0 grains weight No. 1204 powder for a small-game load or short-range target practice.

Pull the bullets, dump the powder in one pile, blend it by thorough mixing, and sift out the dust and fine particles. Then load this wartime Pyro D. G. into charges of 45.0 grains weight, using the visible powder loader, behind the 172-grain boat-tail gilding-metal bullets sold by the Director of Civilian Marksmanship to N. R. A. members. It will prove to be a most accurate target load for all qualification courses up to 600 yards.

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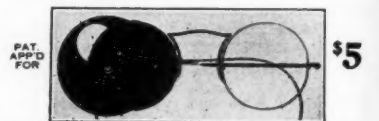
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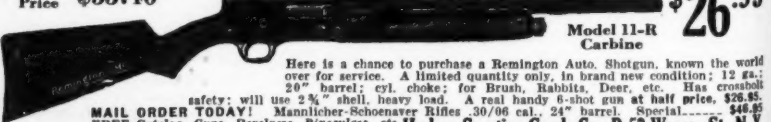


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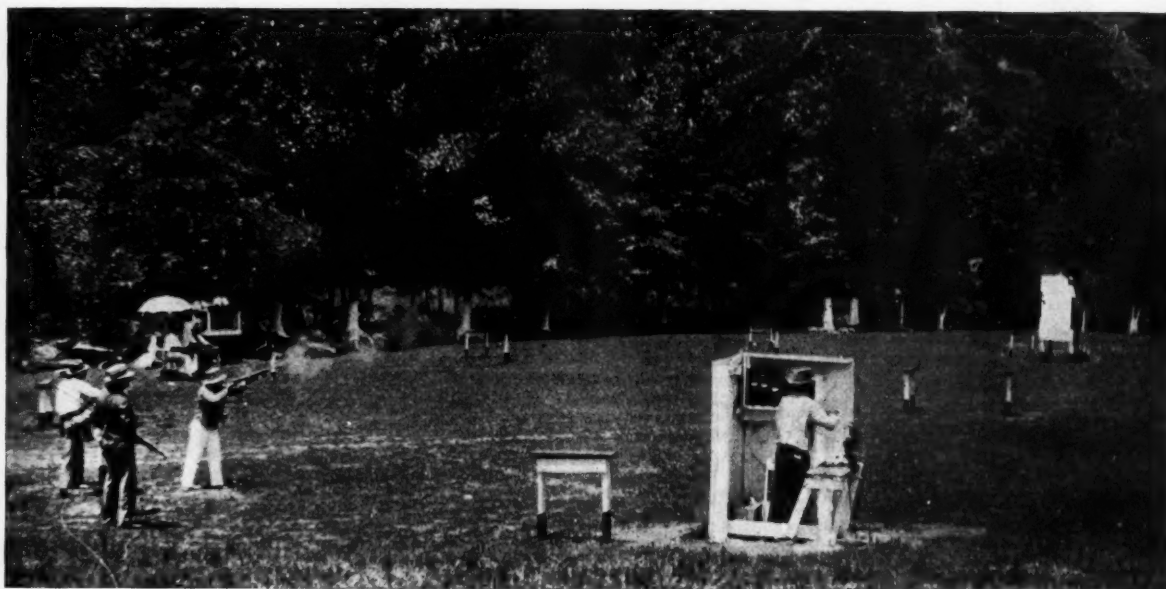
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COLT SUPER 38 Auto, crank condition, holster \$27.50 C. O. D. Paul C. Ray, Lowell, Ore. 10-32

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AIRCRAFT, rubber-boat, with demountable oars, good condition \$30; 20 gauge single-trigger long range ejector shotgun, right improved cylinder, left modified, rubber recoil pad, new, \$28; .22 calibre Remington autoloading rifle model 24-A, long rifle, Lyman peep sight, extra breech block for high power cartridges, \$28. Wm. D. Bergman, 2526 17th St. N. W., Washington, D. C. 10-32

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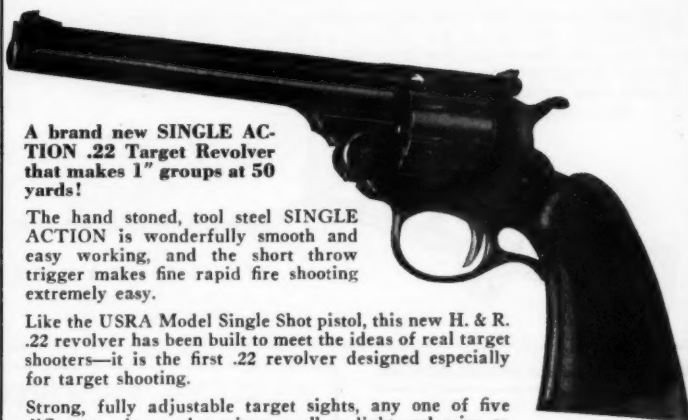
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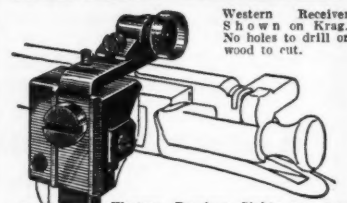
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54 250x3000 or 270 Remington 25. 30 S. Belding
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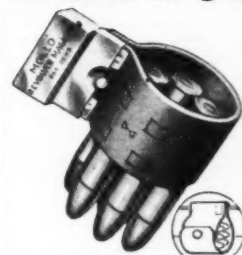
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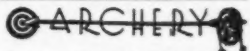
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Rosenfield Police Team Revolver Match

	Total
Boston Police Team No. 1 (Tierney, Desmond, Capt. Lutz, Vail, Cloran).....	1090
Massachusetts State Police.....	1042
Hartford, Conn. Police.....	1007
High individual scores: slow fire—Desmond, Boston, 100; timed fire—Tierney, Boston, 98; rapid fire—Cloran, Boston, 92.	

Individual Championship

1st—Wm. Desmond, Boston, 279; 2nd—E. H. Vail, Boston, 276; 3rd—Norman Sidney, Mass. State Police, 272.

Hultman Tyro Match

	Total
Boston Police Tyro Team (Strange, Markhard, Flaherty, Halleran, Waldron).....	1097
East Providence, R. I., Police (Capt. Thorburn, Fiske, Allen, Rodman, McMahon, Bolton, Quinley).....	1089
Providence, R. I., Police.....	1071
High individual scores: High Aggregate—A. Markhard, Boston Police, 281; Timed Fire—C. O. Allen, E. Providence, 96; Rapid Fire—P. Sancer, Boston, 94.	

Cleveland Federal Reserve Bank Team Leads for 4th Year

This year again, the Cleveland Federal Reserve Bank Team captured first place in the Northern Ohio Revolver and Pistol Tournament. The team, consisting of Wiggins, Lawrence, Roney, Capt. Cashin, Ridiker, Taylor, Banks, Bodner, scored 4573 x 5000. This makes the 4th successive win of this team at this tournament with U. S.

Denver Police Teams Finish First and Third in Colorado State Police Shoot

These teams continued their winning streak by taking first and third places in the Colorado State Pistol Match held in Golden, Colorado. All members of both teams shot U. S. .38 S. & W. Special Mid-Range Sharp Shoulder Cartridges. The scores—First, with 1182 x 1500, *Team No. 1* (Raedel, Vaughn, Pitt, Capt. Campbell—Instructor, Cook, Baskett); third, with 1125 x 1500, *Team No. 2* (Colburn, Foster, Capt. Childers, Capt. Campbell—Instructor, Johnson, Bullock).



BOSTON POLICE TEAM No. 1



BOSTON POLICE TYRO TEAM



EAST PROVIDENCE, R. I., POLICE TEAM



CLEVELAND FEDERAL RESERVE BANK TEAM



DENVER POLICE TEAM No. 2



DENVER POLICE TEAM No. 1



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Norcross-Bartlett Expedition Greenland Sea - 1931



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November 11, 1931.



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